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THE SOUTH IN A WAR ECONOMY*

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It is the lot of our generation to live during a ruthless but fascinating period in which forces have been loosed which rock the very foundations of our civilization. In the summer of 1940 the American public became aware that the expanded danger zone included this country. Honest differences of opinion have arisen among able and patriotic citizens as to the necessity of our entering into a "shooting war" with either Germany or Japan, but there has been a strong consensus to the effect that we should arm against both. We have watched mighty nations pass from the scene within the last two years largely because their people lived in the false hope that they would be allowed to go their way in peace. During such critical times it appears that the only realistic policy is to expect the worst and be ready to meet any possible challenger with superior force.

Our defense program, which started out as a $10,000,000,000 project, has grown steadily since its inception, until allocations and commitments have already reached a total of $64,000,000,000 or almost twice the expenditures of the United States in the last war. Contracts actually let under this program amount to over $40,000,000,000 and money paid out to date amounts to approximately $10,000,000,000. Actual expenditures are now running at the rate of $1,500,000,000 a month and in order to give reasonable assurance that the program will be effective it will be necessary to more than double this rate by 1943.

* Presidential Address, Fourteenth Annual Meeting of the Southern Economic Association in joint session with the Southern Political Science Association, Nashville, Tennessee, November 14–15, 1941.

Such expenditures will inevitably make an indelible impression upon our economy. Thus far they have virtually taken up the slack in our productive capacity and the effects of reemployment and larger pay rolls have been pleasant, but from now on the impact will be harsh. There must be changes in our ways of life, in the relationship between government and business, and in the distribution of wealth and income. It is our task to direct these changes so that the unfavorable ones will be minimized and the favorable ones maximized. This will require all the wisdom, foresight, energy, and leadership that we can muster.

More specifically, how do this world crisis and defense program affect the economic outlook for the South?[1] Our first concern is with the success of the defense program, and we recognize that this will depend largely on what the South puts into it, not on what the South gets out of it. Our primary endeavor must be to adjust our thinking and our activities to the national program in order that we may make our maximum contribution to its effectiveness. Leaders of American thought are beginning to realize, however, that we cannot have the strong nation we all desire until the South, the weakest section economically, is strengthened.

Students of southern economic and social problems have long agreed that the foremost problem of the region is to raise the per capita income and that the best hope for accomplishing this lies in the development of industry.

The South is still primarily an agricultural region. It contains almost 41 per cent of the farm population of the United States, but only 15.3 per cent of the industrial workers. Its farmers, however, received only 21.5 per cent of the total gross agricultural income in 1939, and its industrial workers collected only 10 per cent of the industrial wages.[2]

Throughout most of the South the economic system is based on an agricultural foundation, the keystone of which is cotton. Although the acreage devoted to cotton decreased from 35 per

[1] Throughout this paper the term South is used (as Odum uses it) to include Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, Arkansas, Tennessee, and Kentucky.

[2] The farmers of the South received cash income, exclusive of government payments, of $1,427,752,000 in 1939, and the industrial workers received $918,091,000 in wages.

cent of the cultivated area in 1929 to 19 per cent in 1939 (when more than twice as much acreage was devoted to corn as to cotton) the cash income from cotton and cottonseed was 27 per cent of the total cash income from southern agriculture. Tobacco, the next most important commercial crop, accounted for only 2.7 per cent of the acreage, but for 16.7 per cent of the cash income. Cotton and tobacco have persisted as the chief cash crops because the money incomes per acre and per hour devoted to the cultivation of other crops have been even lower than those received from these staples.

Since the southern economy has been geared to the production of cotton and tobacco for large foreign as well as domestic markets, its prosperity rests to a large extent on world market conditions. A major element in the farm problem of the last 20 years has been the changed international situation which prevented the flow of our surplus agricultural products to Europe, where they had moved previously. Now they are dammed up worse than ever. In no other section is the loss of export markets felt more acutely than in the South. While it is impossible to isolate the effect of the war upon cotton exports because of the presence of other factors, exports of American cotton last season were only 16.5 per cent of the average for the preceding ten years and 17 per cent of those for 1939–40. Thus, the foreign market for cotton has practically disappeared. Not since the Civil War have out cotton shipments been at such a low level.[3]

Under the stimulus of the defense program, domestic consumption of American cotton last year amounted to 9,571,000 bales, which is 23 per cent above the previous record established in 1936–37. This increase in domestic consumption is helpful, but fails by far to compensate for the loss of foreign markets. Consumption plus exports last season amounted to only 10,700,000 bales or 1,604,000 less than the amount produced in 1940. The result was an addition to domestic supply which gave us a carryover of approximately 11,922,000 bales at the beginning of the current season.

In spite of this situation the price of cotton has increased in

[3] Cotton exports in September, 1941, were the largest since October, 1940, but were still only 35 per cent of the 1935–39 average.

recent months to the highest point since 1929. From October, 1940, to September 9, 1941, the price rose 8.50 cents a pound, to reach an average 17.77 cents in the ten markets. This rise is a result of higher loan values, a recognition that the 1941 crop is a small one, and the anticipation of a marked increase in the general price level.

The current increase in the price of cotton does not alter the fact that southern cotton farmers face the most imperative adjustment to be found in American agriculture. Under present and prospective conditions there are simply too many people trying to make a living growing cotton. The situation in tobacco is quite similar. According to the Agricultural Adjustment Administration, the families growing this commodity are equipped to produce at least 50 per cent more than the world now consumes.

Even before the war the South was faced with the long-time problem of reconstructing an outmoded cotton economy, and the war curtailment of export outlets for cotton and tobacco has intensified the problem. The only sound conclusion seems to be that we must build an economy in the South in which cotton and tobacco will have a place, but which will depend less on agriculture in general and on these two crops in particular. A start has been made in the reduction of cotton and tobacco acreage. It seems likely that the cotton acreage being harvested this year is the smallest since 1895. Full participation by southern farmers in the food-for-defense program, now being sponsored by the Department of Agriculture, would not only aid the anti-Axis powers but contribute to the development of a stronger, healthier South.

Any investigation of the effect of the war economy upon the South must include an analysis of the defense contracts. During the first year of the defense program, or prior to July 1, 1941, contracts awarded in the United States amounted to $16,824-069,000 or $128 per capita. Those awarded in the South amounted to $1,973,104,000, or $70 per capita, while those awarded outside the South amounted to $143 per capita. The South, with 21.5 per cent of the population of the country, received 11.7 per cent of the contracts. These contracts awarded in the South were

naturally distributed unevenly among the states. Virginia obtained contracts equivalent to $326 per capita, while Arkansas' allotment amounted to only $15.50 per capita. Virginia's contracts amounted to 44.3 per cent of all those awarded in the South.

It is not surprising that out shipyards account for a major part of the defense production of the region. Although most of the major naval contracts are placed with the shipyards along the North Atlantic, close to the steel mills, the shipbuilding authorities are committed to construction on all four coasts, partly to attain maximum speed in construction and partly to make it difficult for possible enemy bombers to handicap the work.

The yards in the South best equipped to aid in building the nation's $7,000,000,000 two-ocean navy are the Norfolk Navy Yard and the facilities of the Newport News Shipbuilding and Drydock Company. At the time the emergency defense program started these yards were building for the Navy two battleships, scheduled to be completed in 1944, two mine-sweepers and an aircraft carrier. Orders were immediately added for two cruisers, four aircraft carriers and a mine-sweeper at a total cost of $234-600,000. On September 9, 1940, the Navy ordered two battleships to be built at Norfolk and four aircraft carriers and two cruisers to be built at Newport News at a cost of $433,045,000. The contracts awarded on that one day account for almost one-half the money involved in all the contracts placed in Virginia during the first year of the defense effort. No other state in the South received contracts for as much as half that amount during the entire year.

The second most important builder of fighting ships in the South is the Charleston Navy Yard. When the emergency program began it was constructing three destroyers, and contracts for five more were immediately added at a cost of $46,449,000. Later in the year orders were placed for seven more to cost approximately $63,000,000. These 12 vessels account for two-thirds of the defense orders placed in South Carolina during the year.

Other Navy contracts being filled in the South are worth mentioning. An order for four net layers to be built at Pascagoula by the Ingall's Shipbuilding Corporation of Birmingham at a cost of $50,000,000 accounts for practically two-thirds of the value

of the defense contracts placed in Mississippi during the year and orders awarded the Tampa Shipbuilding Company account for 40 per cent of the business placed in Florida. The Gulf Shipbuilding Corporation is also building four destroyers at Mobile.

In addition to our need for naval vessels, the emergency found us glaringly deficient in merchant vessels. We had been carrying only about 22 per cent of our foreign commerce in our own ships and during the 15 years from 1922 to 1937 only two ocean-going cargo carriers were produced in American shipyards. With the Nazis sinking British, allied, and neutral shipping at the rate of 5,000,000 tons a year, it became clear that if we were to import rubber, tin, bauxite, manganese, and other bulky materials of strategic importance, we would have to launch a tremendous shipbuilding program. Fortunately, the United States Maritime Commission, created in 1936, adopted a long-range building program in 1938 calling for the construction of 50 new vessels a year. Prior to the inauguration of the defense program the Newport News Shipbuilding and Drydock Company[4] had received orders from the commission for three tankers, four cargo vessels, seven combination cargo and passenger carriers, and one liner.[5] As the emergency developed, the commission quickened the pace of its regular program. Orders were placed for eight cargo vessels to be built at Tampa and for 27 of a larger and faster type to be built at Pascagoula.

On January 3, 1941, the President announced a new emergency shipbuilding program calling for the construction of 200 standardized cargo carriers. In April, 222 more merchant vessels were added for transfer to Great Britain, and in August provision was made for 566 additional ships. The Maritime Commission adopted the slogan "two ships a day in 1942 and 1943." One hundred thirty-one ship ways are being constructed at an average cost of $1,000,000. Thirty-two of these are in the South: 9 at Wilmington, North Carolina, 12 at Mobile, 8 at New Orleans, and 3 at Pascagoula. Included in the emergency program are 36

[4] As current contracts are completed the facilities at Newport News are being made available to the Navy and the Maritime Commission has the problem of developing other facilities.

[5] The liner, the "America," built at a cost of $15,750,000, was the largest merchant vessel ever constructed in the United States. Converted into a Navy transport last summer, it was rechristened the "West Point."

tankers and 27 vessels to be built at Mobile, 33 vessels at New Orleans, 12 at Savannah, and 37 at Wilmington.

The largest individual item in our expenditures for defense is for airplanes. When the war broke out Germany appears to have had not only twice as many military planes as England and France combined but also twice their plane-producing capacity. The collapse of France transferred most of its productive capacity to Germany and the German bombing has been effective in reducing Britain's production. Consequently, one of our best opportunities to aid Britain is through the production of planes.

During its entire history down to 1939, the American aircraft industry had built less than 45,000 planes. Now it is expected to equip itself to deliver 50,000 annually with all the improvements and complications of modern design. The part played by the South in the direct production of planes is very small. Its only assembly plant of importance, the Vultee plant in Nashville, has until recently specialized in the production of two-place unarmed observation planes. Within the last two months production has started on a new single-engine dive bomber known as the "Vengeance." This plant cannot, however, be regarded as one of the major military aircraft plants of the country.[6] At Memphis, approximately $4,000,000 is being spent remodeling and expanding the facilities of the Fisher Body plant, which formerly made wooden parts for automobiles, preparing it for the production of subassemblies for the medium bombers which will be assembled at the Kansas City plant of the North American Aviation Corporation. Apparently no aircraft engines or propellers are made in the South.

While the South produces relatively few finished airplanes, its contribution to the production of military planes cannot be measured on that basis. Because of the great saving in weight that aluminum makes possible and the consequent gains in speed, aluminum alloy comprises more than 60 per cent of the weight of a military plane and in 1939 the South produced 54 per cent of the primary aluminum made in the United States: 41 per cent at Alcoa, Tennessee, and 13 per cent at Badin, North Carolina. In a special message issued July 2, 1941, the directors of OPM

[6] It produced 22 planes in July.

addressed the people of the South as follows: "Citizens of every section are being called on to carry their share of effort and sacrifice. But for the citizens of the southeastern states there is a special job—THAT JOB IS THE PRODUCTION OF ALUMINUM."

Aluminum is made from bauxite by a complicated series of processes. The first major operation transforms the bauxite into alumina, a powdery substance, and the second converts the alumina into aluminum. In 1939, the United States produced 9 per cent of the world's bauxite, with 96 per cent of this domestic production coming from Saline and Pulaski counties in Arkansas and the remainder from Alabama and Georgia. Domestic production amounted to 45 per cent of the national bauxite consumption. Approximately one-half of the domestic bauxite was used in the chemical industry and in abrasive plants. The remainder, together with practically all imported bauxite, over 90 per cent of which came from Dutch Guiana, was used for the production of aluminum. The bauxite was concentrated to alumina at Mobile and East St. Louis, and the alumina was reduced to aluminum in Tennessee, North Carolina, and New York. Approximately 75 per cent of the aluminum was made from imported bauxite and 25 per cent from domestic. It was regarded as sound policy to depend primarily upon imported bauxite during normal times in order to conserve the domestic supply for such emergencies as the present. The bauxite from Dutch Guiana is superior to that produced in this country, and even after the tariff of a dollar per ton is paid, it can be used as economically as domestic bauxite.[7]

Prior to this year the Aluminum Company of America produced all of the raw aluminum made in this country. Its production of 327,000,000 pounds in 1939 broke all previous records but production in Germany was estimated to be about 25 per cent greater.[8] The aviation industry took twice as much aluminum that year as it had taken two years previously and it was clear that a considerable increase in our productive capacity was essential. The Aluminum Company of America agreed to spend

[7] Testimony of G. R. Gibbons, senior vice-president, Aluminum Company of America, *Hearings Before a Senate Committee Investigating the National Defense Program*, Pt. 3, p. 801.

[8] Herbert A. Franke and M. E. Trought in *Minerals Yearbook*, 1940, p. 653.

$150,000,000 in an expansion program that would more than double its capacity. This program includes the construction of a new sheet-rolling mill at Alcoa, which will triple its capacity to produce high strength aluminum sheet at that location; the speeding up of construction on two dams in North Carolina to provide power; the expansion of the mill facilities for the handling of bauxite in Arkansas; the purchase of additional ships to bring bauxite from Dutch Guiana; additions to the alumina works at Mobile; and an increase in the capacity of the metal-producing facilities at Alcoa and at Badin.

When the defense program started, the officials of OPM were convinced that the productive capacity in existence and under construction was adequate to meet both national defense and civilian needs. Furthermore, they were inclined to rely on the Aluminum Company of America, the only organization in the country with experience in aluminum production, for any additional amounts that might be needed. There was, however, intense dissatisfaction in certain influential quarters, occasioned by the fact that the nation was dependent upon a private monopoly for its most essential air defense material.

Mr. Richard S. Reynolds, President of the Reynolds Metals Company, was apparently one of the first to realize the inadequacy of our plans for the production of aluminum. In the summer of 1940 his company, which had processed aluminum but had not produced it, was granted an RFC loan of $15,800,000 for the construction of aluminum production facilities near Sheffield, Alabama. These facilities, an alumina plant and an aluminum reduction plant, were constructed and began operations last May at Listerhill, Alabama.[9] The alumina plant is sufficient to provide alumina for the reduction plant at Listerhill and also for one at Longview, Washington, which was provided for last February, when the loan from RFC was increased to $20,000,000. The Defense Plant Corporation, a subsidiary of RFC, also announced in February that it would build and lease to Reynolds a $10,000,000 rolling mill at Listerhill for the manufacture of

[9] Listerhill is a new community named in honor of Senator Lister Hill who had encouraged Mr. Reynolds to engage in the production of aluminum and arranged the interview for him with the chairman of the RFC.

aluminum sheet and structural shapes and a $3,000,000 aluminum extrusion plant at Louisville. Listerhill is now the only location in the United States which has the complete series of processes necessary to make fabricated aluminum from bauxite.

The Aluminum Company of America produced 412,500,000 pounds of aluminum in 1940 and will produce approximately 585,000,000 pounds in 1941.[10] On the basis of the capacity for which arrangements had been made last spring, it was estimated that by the middle of 1942 this company would be producing at the rate of 730,000,000 pounds a year and Reynolds at the rate of 120,000,000 pounds.[11]

As the defense program expanded, and particularly after the announcement of the new heavy bomber program, OPM revised its calculation upward and concluded that we need 1,600,000,000 pounds of aluminum a year. It is estimated that 200,000,000 pounds may be imported from Canada, leaving 1,400,000,000 pounds to be produced in the United States. In order to achieve this rate of production the government has contracted for the construction of two large plants for the reduction of bauxite into alumina and seven plants for the production of aluminum.

The alumina plants are being constructed in Arkansas and will have an annual capacity of 500,000,000 pounds each.[12] They are are to be operated by the Aluminum Company of America, but are to be owned by the government. Designed to use low-grade bauxite ores that have previously been regarded as submarginal, it is anticipated that their operation will almost triple Arkansas' supply of exploitable bauxite. Alumina made from the low-grade ore will be used primarily for the production of aluminum leaving the high grade bauxite to be mined and used for chemicals and abrasives. The new aluminum plants are to have a combined capacity of 600,000,000 pounds a year. Two of these plants, with an annual capacity of 100,000,000 pounds each, are

[10] Testimony of Mr. T. W. Wilson, vice-president in charge of operations, Aluminum Company of America, *Hearings Before a Senate Committee Investigating the National Defense Program*, Pt. 3, p. 912.

[11] *Report of Special Senate Committee to Investigate the National Defense Program*, June 26, 1941, p. 7.

[12] Approximately two pounds of bauxite are required to produce a pound of alumina and two of alumina are required to produce a pound of aluminum.

to be located in the South, one at Listerhill, to be operated during the emergency by Reynolds and the other in Arkansas, to be operated by the Aluminum Company of America. Originally, it was planned to construct another smaller plant in North Carolina, but because of the power shortage in the South it was shifted to Tacoma, Washington.

Electricity in large quantities, a prime requirement for the manufacture of most war materials, is especially needed in the production of aluminum. It is now probably the most serious bottleneck in the defense program and, unfortunately for the South, the shortage developed first in this section. The Aluminum Company of America is the nation's largest corporate user of electric power. It takes 250,000 kilowatts, or two and a half times as much electricity as can be generated at Norris Dam, to operate the Alcoa plant alone.[13] The company owns the largest private industrial hydro generating system in the country but depends upon the TVA for large quantities of additional electricity.

As early as March 28, 1935, David Lilienthal called the attention of the Committee on Military Affairs of the House of Representatives to the strategic importance of the Tennessee Valley area from the standpoint of national defense and made the following shrewd prediction: "—I think it can hardly be over emphasized, that not only is there not a surplus of electrical energy in the Tennessee Valley but we are confronted, before this construction program can be really carried out, with the prospect of an acute shortage of electrical energy at a time when it may actually be a matter of life and death."[14] But the committee does not seem to have taken his testimony very seriously, largely because so little industry of military significance was then located in the Tennessee Valley.

It was not until August 1, 1940, that Congress authorized an expansion of the TVA program to provide power to meet the increased needs of defense industries. The program authorized at that time includes Cherokee Dam on the Holston River in Tennessee, which will have a generating capacity of 90,000 kw; the

[13] Statement by David E. Lilienthal in a radio address, May 27, 1941.

[14] Tennessee Valley Authority, *Hearings Before the Committee on Military Affairs*, House of Representatives, 74th Cong., 1st Sess., p. 44.

120,000 kw steam plant in the vicinity of Watts Bar Dam; and additional generating capacity of 36,000 kw at Pickwick and 50,000 kw at Wilson. More recently provision has been made for four additional dams on the Hiawassee River. By the end of 1942 TVA is scheduled to have an installed capacity, steam and hydro, of slightly over 1,500,000 kw. This is a substantial addition to the power resources of the South but two dams on the Columbia River, Grand Coulee and Bonneville, will excel this by 60 per cent.

Greater increases than had been expected in the demand for electricity for defense purposes, including aluminum, ferro-alloys, steel, and important chemicals, combined with a subnormal rainfall produced a shortage of electricity which caused the Federal Power Commission to take steps last May which resulted in the coordination of the generating facilities of 17 states to form a giant southeastern defense power pool. A month later, on June 28, the commission declared the existence of an emergency in the Southeast and urged all citizens of these states to curtail the use of electricity for all nonessential purposes. Daylight saving time was introduced later in the summer in order to conserve electricity.

These arrangements, plus heavy rains in July, gave temporary relief. It was recognized, however, that other measures were necessary and on July 21, OPM announced that it had borrowed J. A. Krug, Manager of Power for the TVA, to head a new power unit designed to handle all defense power problems. Mr. Krug immediately urged the installation of all the efficient generating equipment that could be manufactured in time to meet the emergency and has recently insisted upon certain restrictions on the use of electricity.[15]

The shortage of generating capacity is particularly serious because, while it takes only from 6 to 12 months to construct an aluminum plant, it requires from 18 to 30 months to install economic generating facilities under the present schedule of deliv-

[15] The severity of the renewed drought is indicated by the fact that the amount of electricity generated by water-power in the South during September, 1941, was 33.4 per cent below the amount generated in September, 1940. The total amount of electricity generated in the South, however, was up 25 per cent in comparison with only 20 per cent for the nation.

eries. The situation is made all the more acute by the fact that the only three producers of large generating units, General Electric, Westinghouse, and Allis-Chalmers, are struggling under a backlog of Navy orders.

On July 16, 1941, the Federal Power Commission submitted a plan to President Roosevelt for an adequate power supply for the defense program from 1943 through 1946.[16] Based on the assumption that defense expenditures will be running at the rate of $3,000,000,000 a month by 1943, it provides for the installation of 13,440,000 kw during the four-year period, of which 2,791,000 kw, or 20.8 per cent, would be in the South. If these proposals were put into effect, the South's part of the nation's supply of electricity would be substantially increased since only 14.5 per cent of the electricity generated in the United States in 1940 was produced in this region.[17]

The most important project recommended for the South was the development of 300,000 kw at the Fontana site which was purchased by the Aluminum Company of America more than 25 years ago and is probably the best undeveloped water-power location in the East. After considerable dissension between the Aluminum Company of America and the Federal Power Commission in regard to whether development of the Fontana project by the company would necessitate a federal license,[18] the company and the Tennessee Valley Authority announced last August 15 that they had reached an agreement under which TVA had acquired the Fontana site. Other provisions of the agreement stipulate that when construction of a dam at this location has advanced

[16] Federal Power Commission, Release No. 1637.

[17] Federal Power Commission, Release No. 1634. The plan calls for the division of the new generating capacity for the South during the four-year period as follows: North Carolina, 791,000 kw; South Carolina, 385,000 kw; Arkansas, 357,000 kw; Kentucky, 290,000 kw; Alabama, 240,000 kw; Georgia, 223,000 kw; Virginia, 160,000 kw; Louisiana, 145,000 kw; Tennessee, 135,000 kw; and Florida, 65,000 kw. The absence of any provision for the installation of new generating capacity in Mississippi during this period is accounted for by the fact that this state depends rather largely upon power generated in Alabama and Tennessee. The large amount allocated to North Carolina is primarily a result of two hydroelectric projects recommended by the commission, the Hiawassee-Ocoee to be completed in 1943 with an installed capacity of 210,000 kw and the Fontana to be completed in 1945 with an installed capacity of 300,000 kw.

[18] See Federal Power Commission, Opinion No. 61, March 8, 1941.

far enough for it to be a part of an integrated system, the TVA will take over the operation of the five-dam hydroelectric system of the company.[19] Unified operation of the Alcoa hydro system with that of the TVA is expected to make available a substantial amount of power above that which could be generated by the two systems operating independently.

In addition to the expansion of the shipbulding, power, and aluminum industries, a number of huge plants are being constructed in the South for the manufacture of munitions and explosives. These facilities are government owned and agent operated. Quite commonly a powder plant and either a bag loading or a shell loading plant are located in the same vicinity. The first such combination erected under the defense program was constructed in Virginia under a contract with the Hercules Powder Company. Smokeless powder is manufactured near Radford and moved to the bag loading plant at nearby Pulaski, where fabricated bags are manufactured and filled with powder to be used as a propellent charge for large artillery shells. The cost of these two Virginia plants was approximately $50,000,000. The Defense Plant Corporation also purchased the $26,000,000 smokeless powder plant near Memphis from the British government and it is being operated by du Pont. The army has arranged for the construction of a shell loading plant and ammunition storage depot in West Tennessee at a cost of approximately $20,000,000 and entered into a $25,000,000 contract with the Proctor and Gamble Defense Corporation for the operation of the loading plant. The Hercules Powder Company has a $47,000,000 contract to equip and operate a TNT plant at Chattanooga. A subsidiary of the Allied Chemical and Dye Company constructed a plant for the government at West Henderson, Kentucky, at a cost of $13,600,000, which will be used for the manufacture of anhydrous ammonia, a component of smokeless powder. The TVA also received $6,500,000 for the rehabilitation of Nitrate Plant No. 2 at Muscle Shoals in order to produce ammonia. The du Pont Company constructed a smokeless powder

[19] This system consists of three dams constructed several years ago on the Little Tennessee River and two others, Glenville and Nantahala, constructed to meet the increased needs associated with the defense program. The Glenville Dam recently began operations and Nantahala is scheduled for operation next July. They will add approximately 55,000 kw of assured capacity to the system.

plant at Childersburg, Alabama, at a cost of $48,000,000 and the Brecon Loading Company, a subsidiary of the Coca Cola Company, will operate a $10,000,000 bag loading plant in the same community. Du Pont is building a $26,000,000 plant at Sylacauga, Alabama, which will provide TNT, DNT, and Trtryl for the ordnance department. Huntsville, Alabama, is the location of a 30,000 acre tract on which a $35,000,000 Chemical Warfare Service Arsenal and Ordance Assembly Plant are being constructed. The Mathieson Alkali Works is constructing a $16,000,000 magnesium plant at Lake Charles, Louisiana, and a $20,000,000 plant at Minden, Louisiana, will load shells and bombs. The Cities Service Defense Corporation will manufacture picric acid in an $8,500,000 plant at Marche, Arkansas, a $21,300,000 ammunition loading plant is being located at Jacksonville, Arkansas, and a $12,000,000 bag loading plant at Flora, Mississippi.

One can easily understand the grave concern that has been expressed regarding the economic consequences of the defense program. The Temporary National Economic Committee has referred to it as "an instrumentality of economic concentration the like of which the world has never seen."[20] The Director of Purchases for the Office of Production Management revealed the fact that 71 per cent of the first $8,000,000,000 worth of contracts were placed in 20 cities and their immediately adjacent industrial areas and 68 per cent of the first $10,000,000,000 worth were awarded to 30 corporations.[21] It seems clear, that in its initial stages at least, the defense program added to our geographical and financial concentration.

It is not surprising that this should have been the case. Speed is essential in the defense program and orders were placed with large corporations whose principal plants are concentrated in the industrial centers of the country. These orders naturally followed the previously existing pattern of industrial activity. The factor of major importance, however, in bringing about the industrialization of the South is, not the orders for finished goods, but the location of new productive facilities.

In 1939, prior to the initiation of the defense program, $172-

[20] *Final Report and Recommendations of the Temporary National Economic Committee*, p. 3.
[21] OPM Press Release 337.

031,562 or 12.8 per cent of the total expenditures in the United States for plant and equipment were made in the South. Privately financed defense industrial facilities for which certificates of necessity had been issued through June 30 amounted to $753,123,095[22] of which $149,704,283 or approximately 20 per cent was for the South.[23] Investments by the Aluminum Company of America and its subsidiaries to expand their facilities in Tennessee, North Carolina, and Alabama accounted for over half of this amount. The new aluminum sheet-rolling mill at Alcoa is the largest privately-financed industrial facility in the entire defense program. At the end of July the government had made definite commitments through contracts and letters of intent to finance the construction of $3,145,066,231 worth of defense industrial facilities of which $451,411,164 or 14.4 per cent is scheduled to be located in the South.[24] Approximately two-thirds of this amount is for facilities to produce ammunition and explosives. Only a fraction of one per cent of the government money for the expansion of aircraft facilities has come into the South but 27 per cent of the expenditures for the expansion of production of ammunition and explosives has come into this region.

The government is faced with formidable problems in attempting to encourage industrial decentralization. One of the first bottlenecks encountered was managerial personnel. This is particularly true in the aircraft industry and must be taken into consideration in the location of new plants. The easiest way to increase capacity in a given industry is to arrange for the expansion of companies in the business. One of the big manufacturers is quoted as saying "I can't build another plant more than twenty miles away from my present plant. I haven't the staff to run it."[25] It is reported that the construction of the bomber plant at Omaha has been retarded by the inability of the parent company to provide an adequate number of experienced aircraft executives.

[22] This is the amount allocated to the various states.

[23] The South obtained only 11 per cent of the privately financed industrial facilities during July and August.

[24] The South obtained 21 per cent of the government-financed defense industrial facilities during August. The largest projects were the ordnance plant at Chattanooga and the expansion of the facilities for the production of pig iron at Birmingham.

[25] *Final Report and Recommendations of the Temporary National Economic Committee*, p. 544.

An unfortunate aspect of the concentration of munition plants in the South is that this is probably the type that will be most difficult to adapt to peace time needs when the emergency is over. In the case of new plants that give promise of operating after the emergency, which is the type that everyone wants, the government desires to place them where they will have the greatest market value when the time comes to dispose of them. The company which operates the plant is usually the best potential purchaser, commonly having an option to buy, and its appraisal of the plant will depend largely on whether the location is such that it can be operated efficiently with the rest of the company's manufacturing facilities. The result is that the operating company rather than the government, frequently takes the initiative in deciding on new plant locations.

The situation, nevertheless, is not hopeless. The directors of OPM have appointed a Plant Site Committee to pass on all locations of additional plants or facilities required for national defense. The regulation establishing this committee instructs it to facilitate the geographical decentralization of defense industry in so far as this can be done without retarding the military effectiveness of the program. In addition, the Division of Contract Distribution has been established by OPM to help the Army and Navy spread their contracts as widely and swiftly as possible. It has established field offices throughout the country in an effort to make it easier for manufacturers to get the information and make adaptations in their plants that will enable them to acquire defense contracts.

Perhaps the best single indication of how the South has fared economically during the defense program is found in the Bureau of Labor Statistics figures on the number of employees in nonagricultural establishments. During the 15 months from June, 1940, to September, 1941, the number of such employees in the South increased 18.5 per cent compared to 15.8 per cent in the entire country. Alabama, Virginia, South Carolina, Mississippi, North Carolina, Arkansas, Georgia, and Tennessee exceeded the national average while Florida, Louisiana, and Kentucky fell below. Alabama leads the nation as well as the South with an increase of 26.3 per cent. The average increase in the South was better than that in the Middle Atlantic, West North Central, and Mountain

states but not so large as that in New England, and in the East North Central and Pacific states.

The South sorely needs investment in manufacturing establishments and now that the nation is engaged in the greatest program of plant expansion in its history, we have an unusual opportunity to enlarge the industrial capacity of the South and to train our labor supply in industry without injuring other industrial areas. More could be accomplished in the next two or three years than could be achieved in a generation of ordinary development. Thus far, although tangible progress has been made, the industrialization gained by the South as a result of the defense program leaves much to be desired in both quantity and quality. The amount of foresight we now muster will determine whether we are to intensify existing maladjustments or to use the emergency to build a South that will contribute its share to a strong well-balanced nation.

PRICE CUTTING AND ECONOMIC WARFARE

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The mere mention of the terms "price cutting" and "economic warfare" conveys a vivid picture of reality. Yet despite universal familiarity with the connotations involved there is scarcely a rounded discussion of the terms in modern literature.[1] Recent work in the theory of nonperfect competition seems to have sidestepped them completely in the search for determinate situations in which the principle of sensible action,[2] the maximizing condition of equating marginal revenue and marginal cost, is satisfied. Apparently it is believed that if this is not so, movements must take place in the price and output policy of the firm; the position is inveighed and conveniently disregarded as one of "disequilibrium," one which cannot endure.

But if our aim is to understand the real world, and not to tell the business man what should be done in the name of sensible action, it does no good to suppose that other adjustments are only ephemeral positions which cannot endure. For the fact may be that they persist over long periods of time. There is no reason why we should not, one way or another, fit them into our stationary framework of an unvaried continuum of repetitious output and price policies. Then they can be pointed to as instances in which economic adaptation is decided on other grounds than the reasonable a priori supposition of sensible action would suggest.

[1] Cf. however, F. Zeuthen, *Problems of Monopoly and Economic Warfare.* Despite the inclusion of the term in the title of this work, the sense in which the present writer uses the term has not been developed. Instead usual equilibrium solutions of monopoly and duopoly problems are contained, and on lines which have subsequently been rendered more elegant. The term "warfare" is applied to the indeterminate problems of bilateral monopoly rather than to conflicts among producers.

[2] See Joan Robinson, *Economics of Imperfect Competition*, p. 211. This is, as T. W. Hutchison calls it, the "Fundamental Assumption." See his *Significance and Basic Postulates of Economic Theory*, pp. 83–84.

I

In the main part of this article we shall assume just two sellers offering identical products, as viewed by consumers, and coexisting in a perfect market, i.e., where there is ready communication between buyers and sellers.[3] At some places this assumption will be lifted to admit some slight degrees of market imperfection. Only at the final stage will the argument be extended to encompass the theory of monopolistic competition proper where markets, although highly related, are not identical for separate sellers. The major part of the discussion then is of a duopoly problem in the sphere of imperfect competition.[4]

Matters of definition remain. Price cutting we shall define as the lowering of prices not just below the established level but below the full cost of the quantity that will be demanded at the new price.[5] Economic warfare we shall take to mean an exaggerated state of price cutting in which the aim is to drive the rival permanently from the field. In price cutting the intention is to secure a temporary advantage over rivals unless, in the extreme, it comes to deteriorate into warfare through extension over time. The one policy looks largely to the effect in the one period; the other to the consequences for the future composition of the market.

Palpably, a policy of price cutting on one item will generally be part of a "loss-leader" campaign. Hence it is hoped to offset the losses with gains on other articles in the present, or to build consumer goodwill for the future. Whatever may be these related effects, we shall be interested solely in the ramifications that the price cut has on the sales of the identical item by the rival seller.

[3] Thus perfection of the market in this sense does not unremittingly imply competition. This is merely to include then Edgeworth's principle of recontract for a perfect market but not those of either divisibility or infinite sellers. See his *Mathematical Psychics* (London School of Economics: No. 10, Series of Reprints of Scarce Tracts in Economic and Political Theory), pp. 18–19.

[4] At least as Kaldor uses this term. See his "Professor Chamberlin on Monopolistic and Imperfect Competition," *Quarterly Journal of Economics*, LII, 529. Professor Chamberlin would evidently prefer to abandon the term entirely as a classificatory category of price-making positions. See his "Reply," *ibid.*, p. 538.

[5] Assigning the term to cover all cases of price reduction, even responses to altered supply or demand states, would deprive it of meaning.

II

There are three cases of duopoly price cutting that may be distinguished: 1) price cutting without retaliation; 2) price cutting with retaliatory equalisation, and 3) price cutting with accented retaliation. A further distinction may be made in all of these instances between price cutting with, and without, rationing. The rationing may be adopted by either the innovating or reacting firm. Now let us look more closely at the various cases and interpret the motives which may prompt the particular behavior.

Clearly, by price cutting without retaliation is meant a situation in which one firm lowers its price while the rival does not follow suit. This may be characteristic of a circumstance in which B, the rival, is not aware of the price cut by A, although buyers are. If this is ruled out as contrary to the assumption of complete intercommunication among markets, it may be suggested, for one thing, that B's failure to respond is due to inertia or to slowness in action. Or B may stand aloof from the prospect of permanently "spoiling the market" and incurring the rancor of purchasers when he feels that either A cannot or will not for long persist in the lower price policy.[6] On such grounds B may prefer to keep equipment idle or to produce temporarily for inventory.

Through price cutting it may be that the output has been brought nearer to the competitive norm. Or it may even go in the other direction, of overproduction of the especial product. Actually, to answer whether monopoly power, measured in terms of output, has been reduced or merely reversed in the direction of overproduction, will depend on the supplementary assumptions made.

Nevertheless, should the output aspect be improved, there still remains an uneconomic flavor to the production. For so long as only one firm is producing, the given output will probably be made available at too high a cost. A rationalisation policy of dividing the output between the two firms, so long as the cost of the one firm goes above the cost of the output when supplied by both, would be economically expedient. Failing this, there is a certain amount of social loss whenever a firm which in the interim could be operated economically is, nevertheless, kept idle.

[6] This may lie back of the repeated refusal of sellers "to lose money on the sale."

Price cutting with equalisation refers to a case wherein B meets whatever price A decides to adopt. The reason may simply be a matter of prestige and common-sense policy. Knowing that the markets are fully intertwined B will not want to let A take away his customary clientele. At the same time B will not care to go beyond A's price innovation. In practice we would expect to find this case most often. Sellers always grumble of their need to "meet competition." Other than for loss-leader purposes there would be little reason for price cutting when equalisation is known to be the response.

In the case of price cutting with accented retaliation, as soon as one firm cuts price by a certain percentage, a rival, satisfied with the status quo and determined to preserve it, or merely as a matter of prestige, lowers the price even more emphatically. Obviously, under these conditions, a firm does well to adhere to the established price. Nothing is gained and much is lost by a new policy unless, for some ulterior motive, losses are consciously inflicted on B by A, who knows the reaction pattern. Excluding this contrivance of business strategy A will realize that a lower price on his part will drive his own demand to zero. Manifestly, more subtle ways to make inroads into competitors markets would be better conceived.

The argument so far has been that even with the cut price sellers will be willing to accept any orders that may come their way. Oftentimes this is an inaccurate description of the facts. For sellers do adopt schemes of rationing, of limiting the quantity of sales at the lowered price. Our remarks on price cutting must be qualified for this factor. We can glance briefly at a few of the schemes.[7]

Suppose sales at the cut price are restricted to the purchasers and purchases of the previous period.[8] Tastes unchanged, a windfall income accrues to the fortunate purchasers. Should tastes have turned towards the product in the interval this will be the more true. In the event that they have veered away from the

[7] The literature on rationing is unbelievably sparse, especially of the normal nonwar type as developed in this section. For government-control schemes see A. C. Pigou, *The Political Economy of War*, chaps. XI, XII. Also Professor Pigou's *Economics of Welfare*, 4th ed., Pt. IV, chap. VI. For some more pertinent remarks under normal conditions see A. G. Hart, *Anticipations, Uncertainty and Dynamic Planning*, chap. III especially.

[8] As an announcement of a price cut solely to the trade.

commodity this is still true, though the windfall increase in real income is, to some extent, diminished. In extreme instances of the latter actually less than previously will be bought.

If we take the case where retaliatory price action is not practiced, it may be that the rationing adopted by A will still leave B with a fairly normal complement of demand. Still, over the long period, if A gets a reputation for cutting prices, this will lead to a gradual transference of demand to A. Contrariwise, with price equalisation practiced and A alone rationing sales, demand for B may actually expand.

With emphatic price retaliation, only when the respondent firm rations will any purchasers continue to adhere to the price-innovating firm. Demand, then, may not fall to zero. As a long-run proposition, A will lose custom to the B firm inasmuch as consumers estimate the benefits to be derived from this attachment even though, in the absence of A, the B firm would be a heartless monopolist.

This is all we need say here on rationing schemes. Their reality cannot be overlooked. Every plan usually has some distinctive features of its own. Our comments are perhaps enough to intimate the intricacies involved in their presence.

III

Economic warfare is distinguished from price cutting in that the aim no longer is merely to achieve some advantage at the expense of competitors but, instead, to drive the rival completely from the field. In a word, it is an aggressive plan to become *the* monopolist.

There are the usual preliminaries to this study. Firstly, there is the comprehensible fact that a firm about to be assaulted may submit tamely without a fight.[9] Losses experienced in a few production rounds may cultivate this docile attitude. The quietude of an alternative output may well be preferred. Nevertheless, while its equipment remains in existence, its presence always constitutes some sort of safety valve on the heights to which the monopolist can carry the price. Circuitous attempts might often

[9] Not only euphoniously but descriptively the language of warfare must be employed.

be made to furnish part of the market whenever the price rises sufficiently to make the incursion worth while.

We come now to an important question of economic warfare, namely, whether forcing a firm into bankruptcy ends the battle.

Insolvency exists when liabilities exceed assets, when ownership rights are a negative quantity and creditors' claims are pressing.[10] From the economic point of view reorganization can always surmount this individual predicament. Creditors will have to write off their claims in recognition of their losses or sell the equipment to a new owner at a sum equivalent to its market value.

Let us say that there is acquiescence finally to either reorganization or new ownership, but that in no case does the plant and equipment fall into the hands of the belligerent opponent. Let us suppose, too, that in this way the full cost of the equipment is written off, as worth nothing even in alternative uses.[11] None the less the firm (which we take, as it were, to be a bundle of equipment) is preserved as a going entity despite changes in ownership rights. Excluding the sale of its equipment to the attacking rival, production with it will cease only when the bellicose firm makes it impossible for any management to meet at least prime or out-of-pocket expenses. This condition goes far deeper and much beyond the legalistic stage of bankruptcy.

Clearly, where equipment has an alternative use value, the day when it will cease being used in the especial output will come sooner. Barring some more far-reaching motive, equipment will be devoted to an alternative output when an equivalent return is not realized in the present field. For this reason, in talking of average production costs, we always include the alternative use or market valuation of all the factors engaged at any level of output.[12]

[10] Cf. N. S. Buchanan's treatment of these matters in his *The Economics of Corporate Enterprise*, Pt. III. The analytic quality of this work must be commended as an innovation in applied economics.

[11] This is of course an extreme assumption. There is at least always a scrap value for equipment. See R. F. Fowler, *The Depreciation of Capital*, p. 3n.

[12] For the short period full contractual overhead would have to be included in the curve of average costs. But for the longer period, remembering that revisions of rent contracts are constantly made, and would have to be made after bankruptcy, the alternative use value or the lowest value that would be accepted by factor owners need only be included. Of course, if the warring rival should, in the event of default and bankruptcy, or merely at the maturity of contracts, bid higher for the rent items, as the land and building, it can in so

There are two sets of assumptions vital for the problem of economic warfare. The first set pertains to the cost structures of the contending firms. The second has regard to the capital positions of the firms or their respective abilities, through borrowing or drawing on ownership wealth, to make payments to hired factors in excess of current sales proceeds. Surely this is but a more embossed statement of what is commonly called financial strength. It never needs explanation to the business man, though to the theorist accustomed to thinking on another plane the few words of elaboration are perhaps not amiss.

Examining cost structures we find there are three possible situations: 1) cost advantages lie with the attacker, the A firm; 2) cost structures are equivalent; and 3) cost advantage lies with the attacked, B. All of these contingencies will be elucidated and the ambiguities inherent in the term "cost advantage" ironed out. In pursuing these cost assumptions we shall postulate identical financial structures for the firms.

Let us take first the attacker A possessing the cost advantage. We can understand this to mean that the minimum point on A's cost curve is below that on B's cost schedule. Parenthetically, there is little reason why the minimum cost for each firm should occur at the same output what with the organizational differences among them.

A representation of the cost situation in mind appears in Figure 1. The general market demand curve for the commodity is lettered D_1. The cost curve C_1 pertains to the A firm; C_2, to the B firm. Least cost outputs are respectively at Ol and On. Apparently A has a productive superiority for both high and low levels of output.

Just superficial acquaintance with the diagrams makes it evident that B can be driven from the field without any loss to A. Merely by holding his price slightly below OP_1, the minimum point on B's cost curve C_2, A can supply the entire market with absolutely no loss to himself. B can only continue to produce by using up management wealth and foregoing lucrative alternative uses of owned or controlled factors.

More likely cases, however, are the comparative cost structures

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doing perhaps accomplish its purposes. But these are acts of acquiring rival's "equipment" which we have previously precluded.

depicted in Figure 2. Here, although A's least cost output is below B's, the entire market demand cannot be supplied without loss at any price except above the minimum cost of B. Unless the loss is consciously to be borne by A in enveloping the full amount of sales, B can produce and remain in the field.[13] For A to sell the full market at a price below B's minimum cost would mean a loss of at least LL_1 per unit.

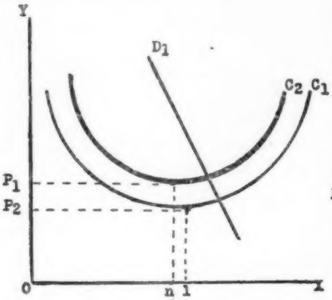

FIG. 1

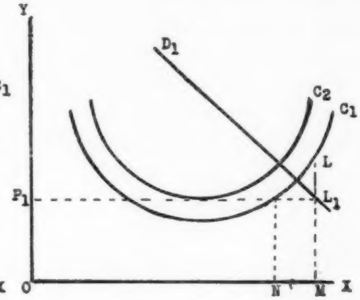

FIG. 2

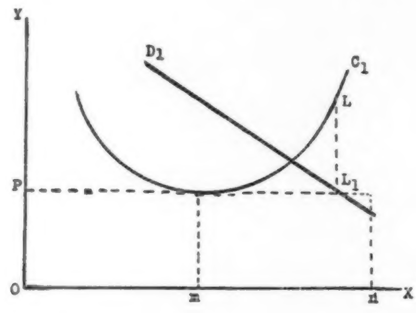

FIG. 3

B could even accentuate this by producing some quantity and driving the price lower still. So long as B stays to the left of its point of minimum costs while A is at a corresponding cost point to

[13] By producing the minimum cost output even though actual sales in any period do not warrant it. It can hold the unsold output from one period to another, meanwhile producing a by-product in the idle periods. Of course, carrying charges would have to be included. See in a similar connection, N. Kaldor, "Market Imperfection and Excess Capacity," *Economica*, N. S. Vol. II, No. 5, pp. 48–49.

the right, the obvious conclusion is that if A went stubbornly ahead to force B completely from the field, its own losses would be so overwhelming as eventually to remove it itself.[14] If B merely announced that it would be willing to sell to any one at a price equivalent to its minimum costs, and A, pursuing its policy, announced a lower one, there seems to be little doubt as to the ultimate correctness of this conclusion. This kind of announcement by B, which does not result in sales, we may call side-line pricing.

But it may be possible, in this second case, for A to drive B out of the field without going to the extreme of supplying the full market. Suppose, at a price just below B's minimum cost, A made available all the output that it could produce without loss to itself. It would be an amount ON in Figure 2.[15] Then the demand quantity NM would remain unsatisfied and open to B. Unless this demand, or the demand schedule that is in a sense left for B, intersected B's cost curve it could not remain in the field. The A firm would thus very effectively accomplish its purpose. To reiterate, the attack will succeed only when the demand remaining to B is too narrow to be supplied profitably.

Let us now turn from an examination of dissimilar cost structures to instances of identical cost set-ups.

Once more a demand curve D_1 is traced in Figure 3. The curve C_1 is a representation suitable either for A or B. At the minimum cost of OP an output of twice Om, or On can be made available by both firms.

Suppose A tried to capture the entire market. Price would have to fall below OP. Losses per unit to A would be forbidding, amounting to at least LL_1 per unit on On units. Warfare would be a costly business to A. In the end it itself would have to succumb, on the hypothesis of equivalent financial strengths and side-line pricing by B.

Finally we may look at the case in which cost advantages lie with B, the besieged. The cost curves of Figures 1 and 2 are now transposed so that C_1 refers to B and C_2 to A. Needless to say, tremendous losses would face A in attempting to win the field. It could not hope to succeed but would ignominiously be driven

[14] Recalling our postulate of equal financial resources to begin with.

[15] The A firm would have to make sure that the goods only got into the hands of final consumers, to avoid secondary markets arising.

out. Whatever losses B might suffer, A's would always and inevitably be far more severe.

Thus it is only when a decided cost advantage is possessed that an attacker can drive a rival with relatively equal financial strength from production. Otherwise the attempt is doomed to fail.

IV

It is time now to discard the hypothesis of equal financial strength; it has served its purpose: we can broaden our assumptions to include dissimilar financial structures.

Say first that the margin of financial strength lies with the attacker. Possessing along with it a cost advantage, it should be able to bull its way into sole dominance, depending, of course, on its margin of cost advantage and financial strength. Even should it be at a disadvantage with respect to cost, it may still succeed if its financial leeway is adequate.

Should preponderant financial strength reside with the attacked, barring extreme cost advantage to the attacker, the former firm should be able to withstand any campaign.

Thus we have found a place in our analysis for the two decisive elements in economic warfare. Undoubtedly vast financial disproportionalities can lead to victory and complete capture of the market in certain production periods, in the sense of supplying the full quantity demanded. Still, it is only a clear-cut cost advantage that is likely to be permanently successful in keeping other firms from the field. For suppose a firm is driven out despite economically superior equipment. If it announces that it will always fill orders at its minimum cost, the financially strong firm will have to face permanent losses: it will never get a chance to exploit its monopolistic position, its ensnaring of the whole market. In the end it, too, would have to disappear.

One reason for the financially strong firm remaining as the monopolist seller after initial success is that, sooner or later, it may buy at a favorable "bargain" price the equipment of dissolving firms. It buys its way, as it were, into a monopolist position.[16]

[16] We are thus driven to recognize the importance of frictions, of access to loan markets which may debar an economically superior firm from competing on equal terms with one inferior economically but with capital market contacts and a superior liquidity position comprised of readily saleable assets.

New entrants have to face a firm with low costs, one which in the period of struggle does not have to plan to meet capital charges of interest and amortization. These must be regarded by new entrants in the same light as prime wage and material costs.

Then there is the essential need of firms in the real world to establish and maintain contacts. Failing this they are permanently lost. And this is perhaps the most incisive reason why side-line pricing, of announcing a price even though the plant is idle, is not resorted to for long in the event of economic warfare. A firm cannot expect that when it remains out of production and its markets are taken up by the financially strong, that the old clientele will later flock back to it merely by its giving notice of a price equivalent to the belligerent rival's. It could in this way make the victory of the monopolist more *Pyrrhic*; but it could not gain very much for itself. Thus there is induced a drift to alternatives rather than of hopeful side-line waiting.

Apart from the continued opposition from a dormant side-line rival, a high-cost belligerent over a period of time always offers a temptation to newcomers to enter the field, what with its necessary high prices. Thus unless costs are low, though financial strength may succeed in the short period, it is not the stuff of which more permanent dominance is made. Each conflict will weaken the firm; eventually it too will succumb.

An attacking firm consciously deciding upon present losses must, therefore, consider the prospect of continued output of present rivals plus new encroachments after a hard-won victory. Otherwise only permanent warfare and irretrievable losses will be in store. The combat will not be worth while unless the expected gains in the stretches of quietude overshadow the anticipated losses in the periods of conflict. For this reason firms in the field will, where possible, prefer some form of agreement and collaboration rather than losses and struggle. It will generally be more agreeable than internecine strife.

V

The deductions which spring from an analysis of economic warfare can be laid out without much furbishment. The emergence of losses, when they occur, is a sign of resources unwisely utilized. Output is uneconomically extended in the line, given conditions

of full employment. The fact that average costs are not covered and output is carried beyond that of minimum costs implies that marginal costs are much in excess of price. The question as to whether the position is still preferable to outright monopolization is unanswerable without further assumptions. The contrast is between an overutilization of resources in the field as compared to an undersupply of them.

There is one instance in which on ordinary output considerations we can conclude in favor of the superiority of one state as against another, namely, in times of widespread unemployment. So long as we accept the convention that more output is preferable to less, economic warfare with its extended output is no cause for perturbation although its sequel, monopoly, may be. Literally, the process of struggle is not to be feared but only the end position of stability.

Continuance of the warfare in periods of full employment cannot but be baneful so long as we view a distribution of resources in fulfillment of consumer demands, given the initial distribution of income as the desideratum. Alternative products, in this view, are sacrificed in the warfare. That loss in the sense of a depletion of personal capital or reduction of income falls on the "monopolists" does not wholly remedy matters. That costs exceed prices reflects the fact that for the general consuming public the resources are valued more highly in other uses.

A more insidious channel via which economic warfare hampers the economic process is merely through the prospect of struggle. Investors will tend to avoid fields in which long-drawn periods of contesting for supremacy are in store. It cannot but discourage entry despite fairly preponderant cost advantages to newcomers through the use of technique not adopted by the existing financially strong firms. In this respect the scales are tipped to favor financial superiority.

VI

It is at once easier to fit price cutting and warfare into the world of monopolistic competition. By the latter we mean situations in which demand for a firm's product will not fall to zero, over some range of prices, whatever the ruling price of its rivals.[17]

[17] Demand thus possesses some inelasticity.

As before we can suppose two close rivals. Their products will be regarded by many consumers as almost perfect substitutes. To others, a greater degree of difference in the product will be noted.

Price cutting without retaliation under monopolistic competition would simply mean that the price-innovating firm can vary its price and thus draw its demand curve on the assumption of other prices constant, as in the well-known Marshallian demand curve.[18]

Equalisation or proportionate changes being practiced by rivals, the demand curve could still be drawn, but this time only on a new assumption of other prices fully adjusted.[19] The demand curve for the firm now would be less elastic than before. There would be less reason, as a rule, to cut prices. Finally, where accentuated retaliation is practiced by the rival the innovating firm will find its demand diminishing as its price falls.[20]

Practically all the reasons offered for the price cutting under imperfect competition can be offered again with hardly any emendation. And there may now be included the desire to influence the long-run demand curve for the product.[21] But normally, as with imperfect competititon, putting out a loss-leader much below its usual price will stimulate profitable complementary buying.[22] Accentuation may be practiced to negate any of these actions by a close competitor. Indubitably, whatever the motivation, price cutting based on other than immediate profit opportunities emerges as a widely familiar fact.

Using some Chamberlinian technique, it is a very simple matter to handle warfare problems. All that one firm needs to do is to hold its price so low that no point on the rival's demand curve can be supplied without loss.[23] This might entail serious inroads

[18] This amounts to Chamberlin's usual assumptions. See *The Theory of Monopolistic Competition*, p. 74.

[19] *Ibid.*, pp. 90–93. Also the writer's article, "The Foundations of the Demand Curve," *American Economic Review*, forthcoming March or June, 1942, issue.

[20] Cf. M. Bronfenbrenner, "Applications of the Discontinuous Oligopoly Demand Curve," *Journal of Political Economy*, Vol. XLVIII, No. 3, p. 426.

[21] Cf. R. Coase, "Some Notes on Monopoly Price," *The Review of Economic Studies*, Vol. V, pp. 22–25.

[22] J. R. Hicks, "The Theory of Monopoly," *Econometrica*, III, 6–7. Also C. Roos, *Dynamic Economics*, chap. VIII and R. G. D. Allen, *Mathematical Analysis for Economists*, p. 362.

[23] This is merely an extension of Chamberlin's case of long-period equilibrium and tangency of demand and cost curves. See *op. cit.*, p. 77.

on its own financial position, and in certain cases of attachment to the besieged firm the task might prove impossible. As always, the better the cost position of the attacking firm, the lower will its own losses be.

A good reason for warfare under monopolistic competition lies in the fact that with the disappearance of the rival, the firm's own demand will be extended and rendered more inelastic. Encroachments of substitutes through time must, however, continually be expected. Once more, the long-range anticipatory point of view must determine the firm's behavior.

Admitting warfare and price cutting as very real elements, customary propositions on the consequences of monopoly positions have, on this view, to be amended and substantially qualified. When we grant the presence of these behavior patterns it cannot be posited that monopoly or oligopoly situations *inevitably* bring a restriction of output. Certainly, in cases such as we have depicted, they do the reverse. For the economic system, moreover, there are the usual effects on substitutes and complements.[24]

[24] See J. R. Hicks, *Value and Capital*, chap. III.

SHOULD THE FEDERAL GOVERNMENT TAX STATE AND LOCAL BOND INTEREST?

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Immediately, the controversy over whether or not interest on federal, state, and local securities should be subject to income tax was precipitated by a message from President Roosevelt to Congress about two years ago. In a more fundamental sense, however, it is fair to say that the controversy has been actively in process ever since the World War and that every secretary of the Treasury has called it afresh to the attention of the public. Indeed, Secretary Mellon conducted a more or less systematic campaign and wrote a book dealing largely with this problem.

Briefly, the issues involve whether or not (a) the federal government should tax the interest on federal securities; (b) the federal government should tax the interest on state and local securities; (c) the federal government should authorize the states to impose income taxes on the interest from federal securities; or (d) some combination of these possibilities. The President in his message recommended that all of these alternatives be adopted. As yet, the only one that has been adopted is the first and that only in permissive form.

Much of the discussion in the literature on this subject hinges on constitutional questions. The question to which this inquiry is directed is: Assuming that Congress can adopt the proposed legislation or assuming that the matter is in considerable doubt, what should be the legislative policy?

I

As presented by the United States Treasury, the arguments for elimination of income tax exemptions of interest on public securities are in the main concerned with (a) the effects of exemptions on the distribution of the tax load, (b) the effects on the

national economy, and (c) the effects on the costs of government. Each of these in turn will be briefly discussed.

Perhaps the most important and the least understood of the difficulties to which the interest exemption gives rise have to do with the influence of these exemptions on the distribution of the income taxes among citizens. Most people understand that persons receiving high incomes must pay higher tax rates than those receiving low incomes. Thus, it is reasonably easy to see that, if a person enjoying a big income can get out of paying taxes, he avoids more liability than do individuals similarly situated who elide a smaller tax obligation. It is the widespread impression that large income receivers consequently put their investments into tax-exempt securities and continue to derive income without paying any taxes to Uncle Sam.

The answer is not nearly so simple as this reasoning implies because the situation depends on technical tax structures as well as on investment details not ordinarily understood by people other than those who especially concern themselves with the issues. For instance, even United States Treasury Department officials found it desirable to divide presentation of their point of view between four individuals because four different kinds of technicalities had to be considered. However, one can get a general notion of the problem by understanding that an investor does not profit from having tax-exempt securities unless his income is above a substantial figure. The exact figure depends on technicalities of the security market and technicalities of taxation but ranged prior to 1940 tax revisions somewhere between $20,000 and $60,000.

By the same token, moreover, a person having a big income in any event would usually find it desirable to invest in government securities only until his taxable income was reduced to about the point at which it became profitable to invest in tax-exempt securities.

Consider, for instance, two or three examples. If one individual has income of $400,000, his federal surtax under the present law would have been $224,780. If he invested sufficient of his savings in tax-exempt securities to reduce his taxable income to half this amount, that is $200,000, then his surtax would amount to but $95,780. Consider another example. A person having $100,000

of taxable income would be liable for $36,780 in surtax to Uncle Sam; but if, by investing part of his savings in tax-exempt securities, he reduced his income by half, his surtax would be cut to $11,780 or a good deal less than one-third of the surtax he would otherwise pay. That is, by cutting his taxable income in half, he reduces his actual surtax liability by more than two-thirds. The picture is even more emphatic if relatively modest incomes of $20,000 and $10,000 be examined. On $20,000 the surtax would amount to $1880, but on $10,000 to only $360. That is, reducing the income by half at this stage reduces the surtax by more than four-fifths.

Thus, it will be seen that the typical rich person who desires to cut his tax liability by shifting his investments will find it profitable to put only a part of them in tax-exempt securities. This issue looms so large that in an address headed "Problems of Intergovernmental Tax Exemption," Under-Secretary Roswell Magill of the Treasury, speaking before the National Tax Conference[1] offered a means of getting around this difficulty which, in his opinion, did not raise the legal questions referred to above.

It is important to understand just how this situation works out in terms of actual investment alternatives. To make this situation clear, the following is quoted from the testimony before the Senate Special Committee on Taxation of Governmental Securities and Salaries[2] by Under-Secretary John W. Hanes, who had superseded Dr. Magill.

> The relative advantage of tax exemption to a person with a large income and to one with a small income may be seen by comparing the positions of a married man with net income from other sources of $500,000 and a married man with similar net income of $5,000. To the man with a net income of $500,000, a 3 per cent fully tax-exempt security affords the same return after Federal income tax as a taxable security yielding 10.71 per cent. To put the case the other way round, he would do as well, after Federal income taxes, with a yield of 0.84 of 1 per cent on a tax-exempt security as he would with a yield of 3 per cent from a taxable security. Contrast this situation with that of the man with an income of $5,000. In his case a 3 per cent tax-exempt security is the equivalent

[1] *Proceedings*, 1927, pp. 388 ff.

[2] *Hearings*, pp. 4 ff.

of only a 3.2 per cent taxable security. If the incomes are also subject to State taxation, the differential in favor of the person with the large income is even greater.

These benefits from tax exemption may be compared to the price paid for them in the form of lower yields. Under present conditions we estimate, upon the basis of an examination of actual market yields, that the differential between the yields of completely taxable and wholly tax-exempt high-grade securities varies from zero, or practically zero, for the shortest maturities up to about one-fourth to one-half of 1 per cent for the longest. The yield differential in favor of long-term partially tax-exempt securities, that is, those that are exempt only from normal income tax, as compared with completely taxable securities of equal quality is estimated at from five one-hundredths to fifteen one-hundredths of 1 per cent.

The reason for the small differential in interest rates, despite the high preferential value of the tax-exemption privilege is that the interest saving to the Government arising from the issuance of tax-exempt securities is measured only by the value of tax exemption to those bondholders who fall in the lowest tax bracket. The differential in interest is relatively small compared to the benefit of the tax exemption to persons in the higher income brackets. Because the outstanding supply of tax-exempt bonds is large it is necessary to sell some of them to investors in the lower tax bracket who will pay for tax exemption only what it is worth to them.

The validity of the argument regarding the interference by tax exemption with the operation of graduated income tax appears to be recognized even by those who are opposed to changing the exemption status of public securities. Some of these persons, however, insist that graduated taxes have been overused and that this particular consideration has little significance.

From the point of view of the national economy as a whole two arguments have been advanced. The first, and probably the most significant, is that the exemption of interest on public securities operates to discourage the investment of private capital in hazardous enterprises. This argument rests on the view that investments in concerns involving unusual risk are largely advanced by those who have high incomes, since only the comparatively large income receiver is in a position to invest significantly in numerous enterprises and thereby diffuse his risks. If tax exemption provides no

advantage for certain investors and renders the net return from a 3 per cent security equal to that of a 10 per cent taxable security, then those in the second class, the very individuals who can best afford to explore new industrial areas, will be definitely discouraged by the alternative made available through this discriminatory subsidy to large investors accompanied by no such advantage to those prepared to advance smaller sums. As a matter of fact, the 3 per cent security, which has no advantage for a small income receiver, is worth as much to an individual having an income before taxes of half a million dollars as stock in an industrial corporation yielding 10.7 per cent. Moreover, there is the lesser risk of the government securities.

In the second place, it is urged, the exemption which is valuable to a large but not to a small investor interferes with the smooth operation of the whole investment market because it provides varying advantages from exemption or partial exemption to different security purchasers. Also the picture is muddled by the fact that changing tax rates alter the value of tax exemption to various classes of investors. Thus, in self-defense certain security owners, when tax rates are changed, must shift from one investment to another. In the national defense emergency that exists today, therefore, it would appear that advancing tax rates may effect a considerable shift in the distribution of the holdings of large income receivers. In consequence, the market will be disturbed most at the very time when the national situation demands a stabilized security market.[3]

These arguments are admitted by many who believe public securities should remain tax free. Others, however, regard the disturbance to the national economy resulting from high death taxes, excessive income tax rates, and other national policies so much more serious than the exemption of public interest that the latter pales into insignificance. This view is particularly characteristic of a considerable section of the investment market itself and of its spokesmen, such as Professor Lutz.

The most debated of all the factors underlying the desirability of eliminating tax-exempt interest on public securities is based on

[3] Of course, this result would not *immediately* be precluded by adopting the taxing, instead of the exemption, policy.

the revenue significance of the policy which, in the opinion of the United States Treasury, although important, is not a major policy consideration. The estimate of the Treasury is that in round figures the federal tax revenue which would be added to the present total tax income had the United States never adopted a tax-exemption policy of this sort would gross between $200,000,000 and $400,000,000. On the other hand, additional public interest costs would have to be borne to the extent of somewhere between, roughly, $60,000,000 and $170,000,000. Thus, there would be a net gain for taxpayers amounting to possibly $150,000,000 to $300,000,000. These revenue figures do not include the state income taxes on federal securities, the amount of which has not been carefully estimated.[4]

It is important, in the minds of many representatives of local levels of government, that all of this tax gain would accrue to the federal government and nearly all of the state income tax additions —omitted from these figures altogether—would accrue to the state governments. Whereas local governments would incur nearly two-thirds of the interest loss, they would enjoy only a negligible amount of the tax revenue gains. This line of thought has been the fundamental basis on which the Conference on State Defense has largely made its case and on which it has enlisted the support of many groups of local public officials.

Other students of the problem have differed somewhat from the estimates developed by the Treasury; and one eminent witness, whose viewpoint will be discussed later, has concluded that the losses might exceed the gains. However, statisticians who have studied the data in detail, with minor exceptions, are of the opinion that the total net cost of government is materially increased by the existence of tax-exempt securities.

One error which has been committed in this connection and which has caused misunderstanding has come from the fact that in order to develop valid illustrations witnesses have used the outstanding indebtedness as a means of showing the fiscal consequences of possible alternative policies. As a matter of fact, the administration has not proposed, and Congress apparently has never considered, any plan which would affect the total situation in any

[4] The figures in this paragraph are above those submitted in the 1939 hearings to compensate for tax rate increases. The changes represent the writer's own rough guesses.

major respect at the outset. The influence on tax revenues as well as the influence on increased interest costs would begin to be felt immediately after the adoption of the policy; but the full effects would not be felt for perhaps 50 years or longer when the present outstanding debt of the United States, the states, and the localities might reasonably be expected to be retired—at least in the main. If an individual large county, for instance, has outstanding $100-000,000 in bonds, adoption of the proposal made by President Roosevelt would in no sense affect the interest cost to the county incident to servicing this debt. It would, however, affect the interest cost on any new indebtedness which the same county might incur. Consequently, as a matter of prospective development, should Congress enact the interest exemption repealer which President Roosevelt proposed, any unit of government could look forward to increased interest cost only if it contemplated incurring additional debt or floating new issues to refund outstanding debt. Perhaps in the near future approximately $2,000,000,000 to $3,000,000,000 annually will be added to the outstanding volume, and the interest on this amount might be made taxable.[5] If the average interest rate on this volume were increased 0.4 points, which appears to be about the average of the suggestions that have been offered, the total amount of interest loss from the tax the first year of operation would be $8,000,000 or $10,000,000 for the entire country instead of more than $100,000,000 as has generally been thought.

Those who adopt the view that changed cost of government is a significant argument suggest frequently that the net balance alone should be considered; that is, in determining sound policy it is erroneous to take account only of the increase of tax revenues which would accrue from making public interest subject to tax. It is equally erroneous to direct attention to interest loss by government borrowers. The sensible viewpoint would be to examine the net results of adding the tax revenue *and* subtracting the interest loss. Many, however, agree with the Treasury that this argument is less important than either of the two just suggested.

A final significant factor bearing on the cost of government, how-

[5] The absolute amount of outstanding state and local debt has declined by two-thirds of a billion dollars since 1932. U. S. Bureau of the Census, *State and Local Government Debt: 1940*, State and Local Government Special Study No. 13, p. 19.

ever, relates to the distribution of the advantages of tax exemption subsidies in respect of public securities. Generally speaking, if the federal government grants a subsidy to the states or to their subdivisions, it does so on the basis of some reasonable distribution principle. WPA funds are distributed among the states according to a rough, but reasonable, basis of apportionment. Highway aid and grants for vocational education, for instance, are given the states and the localities on a definite objective basis involving, for example, population, area, school population, or some other measuring stick. On the contrary, the interest subsidy granted through the exemption of public securities is tossed about helter-skelter depending not on a statutory policy but on whether government units do or do not borrow heavily. Thus, the people of Kentucky on this particular score enjoy the least subsidy per capita of those of any state. The reason for this is that on the whole Kentucky state, city, county, and school district governments have less outstanding per capita debt than any other state. On the other hand, the subsidy to New York State is more than eight times as great per person[6] because the state and its municipalities and subdivisions generally have unusually heavy debt obligations outstanding and consequent large interest payments. It is an anomalous situation, from the viewpoint of the cost of government in general and the federal subsidy policy in particular, that the government should adopt a plan which, in effect, leaves the amount of subsidy granted by the federal government to the caprice of individual government units or to the incidence of extraordinary occasions for state and local financing.

This consideration can be stated positively: Whereas all taxpayers would gain alike from the added revenues from federal income tax, so far as geographical location goes, New York taxpayers would lose from removal of the interest subsidy over eight times as much as would Kentucky taxpayers. That is, the net gain to Kentuckians from doing away with the interest exemption would be much greater than the net gain, on the average, to New Yorkers.[7] The Roosevelt group favoring repeal of the exemption

[6] The advantages to the taxpayer of the average state from the interest gain are about three and a half times as great as to the average Kentucky taxpayer.

[7] Because per capita income tax payments in New York are above those in Kentucky, the differential here would not be eight to one.

might in Kentucky have formulated their position in the question: Does Kentucky wish to perpetuate New York governmental units' interest subsidies and relieve New York bondholders of federal tax payments in order merely that a few Kentucky government units might enjoy one-eighth as much interest advantage and a few local security owners shall get out of taxes? Perhaps such a question would have been unpalatable to New York citizens who have ways of finding out about Kentucky campaigns! Anyway, it appears not to have been used.

II

Opposed to eliminating the exemption of public interest payments from income taxes are large numbers of individuals and political groups of various sorts. It is of interest that the record of Senate hearings appears to disclose few instances, if any, of persons in opposition other than those directly or indirectly representing borrowing units of government. In contrast, a considerable number of persons without any apparent connection with borrowers or lenders appeared in support of the movement to eliminate exemptions.

In general, the case for the opponents of statutory elimination of the exemption policy, aside from those who appeared on legal grounds, may be summarized in four points: (a) revenue gain over interest loss would be either non-existent or negligible; (b) the discount of bond prices on account of the taxation of interest would include an additional discount to offset possible future taxes which cannot currently be predicted; (c) the diversion of capital from enterprises involving heavy risk is more affected by other factors than by exemption of security interest; and (d) legislation and litigation to establish a taxation policy would cause an undue upset in public planning and would constitute a serious disturbance to the national economy. These objections which, in the main, represent attempts to answer positive arguments in behalf of exemption will be discussed in turn.

Most of the case in opposition to the taxation of securities interest in so far as it rests on revenue grounds was prepared and originally submitted by Professor Harley L. Lutz as a monograph on *The Fiscal and Economic Aspects of the Taxation of Public Securities.*[8]

[8] Presented as evidence in the Senate *Hearings*, *op. cit.*, pp. 91 ff.

This analysis was prepared in behalf of the Comptroller of New York State and was submitted at his request.

Mr. Lutz estimated that the interest loss from the taxation of local securities on the basis of those now outstanding would approximate $113,000,000, and the tax gain to the federal government in income tax receipts in 1937 would have amounted to about $120,000,000; but he suggested evidence that the revenue gain might have been considerably less. It appears that these data disagree sharply with the statistics submitted by the Treasury and referred to already in this discussion. Mr. Lutz, according to other witnesses,[9] appears to have erred by assuming for purposes of his computation of revenue gains that any particular taxpayer would either invest only in government securities or in nothing. In consequence of this erroneous assumption, the total arrived at is far different from the total computed on the same assumption on the basis of the actual present distribution of tax-exempt security holdings among present owners. It is pointed out by numerous witnesses on both sides of the controversy that nobody can estimate the relationship which in the future will exist between aggregate volume of income of individual holders and the amount of that income derived from government securities. One cannot, for instance, predict the total effect of taxing the securities in itself on the distribution of government bonds among different classes of owners. One difference between the viewpoint of Professor Lutz and his colleagues and the Treasury Department which has not been resolved is the influence of the taxation of securities on the effective rate of interest necessary to secure capital. It may be hazarded, perhaps, that any estimate of this variable is subject to considerable error; but the difference in viewpoint on this score was not very great as exemplified in the unimportant difference between Lutz' and the Treasury's estimates of interest loss from abandoning the exemption policy.[10]

As to the proponents' argument that the existence of a large block of tax-free bonds results in undue disturbance to the national

[9] Professor Paul Studenski, *Hearings*, pp. 546 ff.; and Treasury Department witnesses, *ibid.* pp. 573 ff.

[10] Lutz' estimate of loss of $113,000,000, if all state and local interest now paid were subject to tax, it will be noted, is only slightly above the maximum of $105,000,000 from this source estimated by the Treasury.

economy, the witnesses who approve the present policy answer emphatically that the tax disturbances to the national economy arise from unwise graduation policies, extremely high rates, and poorly conceived individual tax measures. Therefore, these contestants insist, resorting to the argument that the interest exemption interferes with the smooth functioning of the national economy represents a mere quibble. Unquestionably, a strong case has been made for the view that other tax policies constitute a serious handicap to investment in enterprises involving heavy risk; but one is unable to say, on the basis of the discussion so far, whether the extent of interference from tax-free interest or from other revenue policies is more serious. One might perhaps say as a matter of common sense that errors elsewhere do not justify wrong policy in this respect.

A witness who was an official of the Investment Bankers' Association of America suggested that, if Congress sought to eliminate exemptions directly, tremendous disturbances to the business community would occur as a result of the uncertainty attending such legislation.[11] He also suggested that litigation to test the constitutionality of any such legislation would undoubtedly follow and that the adverse influence on economic enterprise would continue throughout such a period of controversy. As a matter of fact, this predicted difficulty was compared with the unsettled state in business circles which attended the Supreme Court reorganization proposals previously before Congress.

It is hard for one who is not directly concerned with the outcome of the controversy except as a citizen to understand how such disturbance could be greater than that which might reasonably be expected from sustained debate over a period probably of several years pending consideration of another constitutional amendment having to do with this problem, which this witness proposed. There is, however, little doubt that some business activities are impeded by such uncertainty.

III

Thus far, the discussion has related indiscriminately to the effect of the proposed interest exemption repeal on federal, state, and

[11] "Statement of John S. Linen," *Hearings, op. cit.*, pp. 259 ff.

local government and on individual citizens. No attempt has been made to distinguish between different types of local government units in respect to the incidence of the added interest load which would result from taxing the interest on public securities. It is appropriate that consideration be given to some of the issues bearing on the position county government occupies in this situation.

In the first place, let it be kept clear that the citizen of a county is also a citizen of the state and of the United States. Moreover, the integrity of county government depends in considerable measure on the prosperity of other units of government to which the citizen of each county is subject. Therefore, one way of viewing the exemption issue is to consider the relationships of the individual citizen of a county to the various governments claiming his allegiance and to examine the benefits or losses such a member of the community will incur from a proposed government policy. If one adopts this view of the situation, then on a purely dollars-and-cents basis as respects net revenue additions over interest losses, he will undoubtedly reach the conclusion that interest payments by all units of government should be subject to tax.

Other county officials may take the attitude that their primary concern is to look after the county as such and ignore, or consider lightly, the position of the individual citizen. In the event one accepts this view and considers this one factor alone, he probably will arrive at the conclusion that the exemption should be maintained.

In reaching these categorical statements, however, any enlightened public official must be on his guard, since certain technical factors are changing from time to time. The amount of new indebtedness being incurred by county governments in most sections of the United States is so small that the taxation of interest on all future issues would immediately be almost negligible. In general, the counties of the country are paying off their debts a good deal more rapidly than they are incurring new ones.[12] This is the almost inevitable result of the fact that the heyday of county road construction, the largest single occasion for county debts generally, passed some years ago.

[12] From 1932 to 1940 there was a reduction in gross debt from $2,531,456,000 to $2,155,817,000, or nearly $400,000,000. Bureau of the Census, *State and Local Government Debt: 1940*, State and Local Government Special Study No. 13, p. 70.

Since this is the case, it is obvious that the problem of exemption or taxation of public securities is one of comparatively little financial significance to county governments as such. Seemingly, the conclusion is unassailable that maintaining the present policy or shifting to a policy of imposing federal income taxes on interest from new county securities would not endanger the integrity of county government in general. Moreover, the counties have, from this particular point of view, a lesser stake in this subsidy than do cities or even school districts.[13]

Speaking generally, arguments with respect to the general distribution of the tax load, with respect to the influence on the national economy of exempting public security interest from income tax, and with respect to miscellaneous other angles do not peculiarly involve the county governments. The only issue with which the county government as such is concerned is the direct relationship to government cost. The exemption policy means slightly less county government expenditure than the taxing policy, but costs the individual taxpayer more.[14]

[13] Of course some counties are school districts. The reference in the text is to the vast bulk of counties which do not serve as school districts.

[14] This paper was prepared in May, 1941.

THE BERYLLIUM INDUSTRY: A CASE STUDY IN MONOPOLISTIC COMPETITION[1]

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In the late 1920's articles began to appear in current magazines about a "new" metal with which scientists were experimenting. It was not really new for beryllium was discovered by a French chemist in 1797.[2] Since that time it has been the subject of almost continuous research. It remained little more than a curiosity until the twentieth century when research technicians began experimenting with the metal in an effort to make it useful in industry. The ore from which beryllium is extracted—called beryl—is a "compound silicate of aluminum and beryllium. It varies in color from white to green, blue, yellow, and even red, but usually is some shade of green. Clear, transparent crystals are cut as gems. The deep green variety—which is supposed to contain chromium—is the emerald, more expensive than diamonds; aquamarine, a sky blue or greenish blue variety, is also a precious stone."[3]

I

The development of the beryllium industry had to wait until chemists could find a method of extracting beryllium from beryl ore without incurring too much cost. The difficulty was in the peculiarly "sociable" nature of the metal. It is particularly reluctant to part from oxygen. The complicated and expensive process of extracting the metal from beryl had made its commercial use prohibitive as late as 1931. By this time considerable

[1] This study is based primarily on the published *Hearings* of the Temporary National Economic Committee, Part 5, "Development of the Beryllium Industry," pp. 2011–2158.

[2] Davis Watson, "A New Metal," *Current History*, Nov., 1927, p. 249.

[3] Beryllium Could Work Wonders If It Weren't So Sociable," *Business Week*, Jan. 14, 1931, p. 34.

progress had been made in the methods used. In 1920 the price of a pound of beryllium was $5,000. In 1931 the price had dropped to $50 per pound. The vast possibilities of beryllium in industry may be gleaned from some of the characteristics of the metal. It is one of the 92 elements of the earth; only three other elements are lighter than beryllium and two of them are gases, leaving only one metal, lithium, that is lighter than beryllium. The metal is one-third the weight of aluminum and is much more resistant to corrosion. It also is 17 times as transparent to X-rays as aluminum.

The most important feature of beryllium is the manner in which it combines as an alloy with other metals such as copper and nickel to create certain characteristics. For example, structural steel has a tensile strength of about 60,000 pounds per square inch, stainless steel 90,000 pounds, nickel copper alloy about 125,000 pounds, and beryllium copper alloy with about 2 per cent beryllium and 98 per cent copper, 185,000 pounds. Still more astounding—an alloy of 2 per cent beryllium and 98 per cent nickel produces a tensile strength of 300,000 pounds per square inch. Beryllium nickel and beryllium copper compare as favorably with other metals in hardness as in strength. A piece of die steel and beryllium nickel were placed together under tremendous pressure. A large dent was made in the die steel, but the beryllium nickel was unscarred. Another favorable characteristic of beryllium is that it is "non-sparking." This is of great advantage in the manufacture of explosives and inflammable materials where one spark from a tool may cause a disastrous explosion or fire. Beryllium alloys will not create sparks no matter how violent the contact with other metals.[4] An important consideration for mechanical engineers is the "fatigue" resistance of a metal. How many times will a spring flex before it breaks? The best steel automobile springs will vibrate two or three million times before breaking—beryllium copper springs will vibrate 20 billion times. This characteristic will make the metal useful in aeroplane engines where valve springs need great "fatigue" resistance. Beryllium can be used for this and other purposes to great advantage also because of its unique reaction to heat. Beryllium is at its best

[4] TNEC *Hearings*, *op. cit.*, pp. 2012–2020.

at 900 degrees Fahrenheit, losing none of its strength or other properties under such heat. The aviation industry stands to gain greatly in better and faster aeroplanes through the use of beryl-

TABLE I

KNOWN APPLICATIONS FOR BERYLLIUM COPPER

PRODUCT	CHARACTERISTICS
Paper making machinery	Non-sparking
Temperature sensitive instruments	Fatigue strength
Power plant equipment	Fatigue strength
Car heating equipment	Fatigue
Steam turbines	Fatigue
Electric ranges	Strength, heat resistance
Mills and pulpers	Non-sparking, wear
Grinding mills	Fatigue
Gear reducers	Wear
Aircraft instruments	Fatigue (fatigue-hysteresis or stability)
Aircraft	Strength, wear, fatigue, finish
Aviation equipment	Fatigue, corrosion
Household appliance	Strength, fatigue
Business machines	Corrosion
Radio	Fatigue, stability
Automobile	Wear
Centrifugal	Wear
Magnetos	Strength, fatigue
Pumps	Strength
Water and gas pumps	Fatigue, non-sparking
Cable fittings	Strength, corrosion
Gasoline pumps	Fatigue, corrosion, heat resistance
Instruments	Strength, corrosion
Scales	Wear
Temperature measuring instruments	Corrosion, fatigue, stability
Industrial measuring instruments	Strength, corrosion, wear
Surgical instruments	Strength, stiffness
Industrial measuring instruments	Fatigue (fatigue-hysteresis or stability)
Elevators	Conductivity, fatigue
Machine tools	Wear
Steam turbines	Heat resistance
Pressure reducing valves	Stiffness
Power shovels	Strength

Source: TNEC *Hearings*, Part 5, "Development of the Beryllium Industry," pp. 2297–2298.

lium. The table on the following page is included to indicate the wide range of uses to which beryllium is already being applied and to show the characteristic that makes it preferable for each use.

Andrew Gahagan, president of the Beryllium Corporation, testifying before the Temporary National Economic Committee concerning the future of beryllium, stated that "beryllium . . . is going to make it possible to use copper and nickel in a lot of places where they are not now being used. It is going to make possible inventions of new types of machines, motors, electrical equipment, and so forth. As a matter of fact, we could write the history of the world in terms of metallurgy. The iron deposits in England made it possible to produce iron cheaply and made the industrial revolution. The development of steel made trains possible; the development of alloy steels made automobiles possible and so the development of beryllium alloys is going to mean new and improved types of motors, telephone instruments, airplanes, and a thousand and one changes in our life."[5]

II

As far as is ascertainable, there is an abundance of beryl ore in the world. It is usually found in conjunction with other minerals. There is probably more beryl ore than lead. In the United States the ore is found along the Atlantic seaboard from Maine to Georgia. Deposits have been located in North and South Dakota, Colorado, Utah, Wyoming, Nevada, California, New Mexico, and Arizona. As yet, there is considerable uncertainty as to the extent and value of these deposits though present indications are that no difficulty will be experienced in this respect, even in the distant future should the metal become widely used. The ore is about 10 per cent pure and, as already indicated, the major bottleneck in the development of the industry is the task of separating the beryllium from other minerals.

Assuming that beryl ore is plentiful, it appears that the beryllium industry is destined to become basic in the economy of the not too distant future. Its development to date has been fully as spectacular as was that of aluminum up to the same point. It has already encountered conditions of duopoly, price fixing, price leadership, attempts at combination and monopoly, and limitations on production. The patent situation has also played a large part in the development of the industry. These various conditions will be considered subsequently.

[5] *Ibid.*, p. 2021.

III

Though there have been 15 or 20 companies that have at different times attempted the production of beryllium, at present there are only about five or six now in the business. Among them are the Cooper-Wilford Company, the United Alloys Company, the Brush Beryllium Company and the Beryllium Corporation. The last two have played the most prominent part in the industry, the others being insignificant in the production of beryllium. The largest and most important company is probably the Beryllium Corporation of Reading, Pennsylvania, headed by Andrew Gahagan. Even though this company leads the field, it is small compared with older established companies in other industries. The Beryllium Corporation has assets valued at approximately $3,500,000.[6]

In his testimony before the TNEC Andrew Gahagan indicated that he was attempting to obtain control of the beryllium industry through the use of patents.[7] He carried on an extensive research and spent large sums of money in developing the metal and was able to obtain several patents relating to the extraction of beryllium from beryl ore. He soon discovered that the processes used in alloying beryllium with other metals, such as copper and nickel, were as fundamental as those used in extracting the metal from ore. He expended great time and effort along these lines but soon discovered that others had carried on similar research and had acquired patents on the alloying and heat treating of alloys that are essential to the industry.

Control over the industry would necessarily depend on complete control of the patents relating to beryllium. No monopoly could be realized through control of the sources of supply of the ore as in the aluminum industry because the sources were too numerous and scattered and Mr. Gahagan's limited funds would not permit large investments in land. His company owned no beryl ore mines whatever, but bought all the ore needed from other companies.

Efforts toward control were halted when it was discovered that

[6] *Ibid.*, p. 2046.
[7] *Ibid.*, p. 2050.

important patents concerning the alloying of beryllium with copper and nickel had already been taken out. These patents were held by Metal and Thermit Corporation of New York City. Further investigation revealed that Metal and Thermit had not taken the patents out in its own behalf but was merely acting as agent for the powerful Siemens and Halske Company of Berlin, Germany.

Gahagan attempted to negotiate with the American company of Metal and Thermit with the idea of reaching some agreement for the cross-licensing of patents on beryllium. Metal and Thermit refused to deal with Gahagan or to refer him to the German company. On his own initiative, however, he made a trip to Berlin, Germany, in the latter part of 1933 for the purpose of reaching an agreement on the beryllium patents. Gahagan held several important patents on beryllium and he felt that this fact would serve as a weapon in persuading Siemens and Halske to listen to his proposal for making some sort of agreement for the exchange of information and use of patents. In this he calculated correctly. After much bickering and negotiating he finally reached an agreement with Siemens and Halske for the mutual exchange of all future research information and findings as well as for the mutual use of all patents held by the two companies. It was also agreed that certain sales territories of the world should be allotted to each company. The contract embodying the various points of agreement read in part as follows:

Wherein it is mutually agreed between the parties hereto as follows:

The parties hereto agree to cooperate in the entire field of beryllium to the fullest possible extent and to mutually assist each other in every possible way through advice, exchange of information and experience, assistance with regard to patents, making available to the other party all patents, patent applications, trademarks, and similar rights relating to the entire field of beryllium, beryllium alloys, beryllium compounds, beryllium salts or products, hereinafter for brevity collectively termed beryllium, or methods, processes, machinery, equipment and tools and appliances for their manufacture now or hereafter owned or controlled or in which it may have licensable interest and to the extent of such licensable interest and by every other technical, business or legal manner possible subject nevertheless to the provisions of this agreement.

1. The parties hereto agree that the entire continent of America is the

exclusive territory of the Beryllium Corporation and that the entire continent of Europe is the exclusive territory of Siemens and Halske. Concerning the other countries agreements will be made from year to year, subject nevertheless to the provisions of paragraph 4 hereof.

2. During the term of this agreement, and solely for the field of beryllium, each party hereto grants to the other party, for the exclusive territory of such other party, the sole and exclusive right and license, including the right to sublicense for the term of this agreement.[8]

Metal companies in France, Italy and England were also working on beryllium at this time. A few months after the above contract was signed, Gahagan made another trip to Germany to iron out some new difficulties. While in Europe he was asked to stop in London on his way home to see a man named Jamieson, who was chairman of the Board of the huge Vickers Company of England. Gahagan was surprised to learn that Jamieson had acquired some stock in the Beryllium Corporation. Jamieson was vitally interested in beryllium and wanted to buy the metal from Gahagan to be used by the British in the aviation and other vital industries. Gahagan explained that he could not sell to Vickers because that was part of the German territory according to the contract with Siemens and Halske. Mr. Jamieson told Gahagan that the contract should be modified, because England could not afford to be dependent on Germany for any military needs. Mr. Jamieson sounded convincing enough and so Gahagan decided to let him try to get the contract modified.

Jamieson and Gahagan went to Germany and conferred with the officials of Siemens and Halske and, after several days of negotiating, the contract was modified so that the Beryllium Corporation could sell beryllium in England. It is uncertain how Jamieson persuaded the Germans to change the contract—none the less it was changed, leaving England independent of Germany so far as a source of beryllium was concerned.

Since acquiring the rights of the German patents in the United States, the Beryllium Corporation apparently controls a great majority of the important patents related to beryllium. The corporation has made no effort, however, to enforce these patents. Some of them are related to the alloying and heat-treating of cer-

[8] *Ibid.*, pp. 2279–2280.

tain alloys and are used by customers of the Beryllium Corporation. Other patents relating to the extraction of beryllium from the ore were being used by the company's competitors. Probably one reason for this situation is that the patents have not yet been tested in the courts. The patents are so complicated and technical and cover such a wide range of processes that there is some question as to the "coverage" and validity of many of them. Other companies that have done work in beryllium doubt the validity of some of the patents related to alloying processes now claimed by the Beryllium Corporation. Gahagan indicated in his testimony that he intended to clear up the patent situation by proving his patents in the courts and by charging a specific royalty for their use by other companies.

IV

The Brush Beryllium Company of Cleveland, Ohio, is the only significant competitor of the Beryllium Corporation. It was organized in 1931 through the efforts of Brush Laboratories Company. Brush Beryllium began the sale of beryllium on a commercial basis in 1934. According to the testimony of Dr. Charles B. Sawyer, president of Brush Beryllium, his company has the distinction of having the benefit of the most extended research in beryllium in the United States. His reference was to the work done in beryllium by the Brush Laboratories Company, which began experimenting with beryllium as early as 1921. It is on the basis of results obtained from this research that Dr. Sawyer challenges some of the claims of the Beryllium Corporation concerning patents.

The testimony of Dr. Sawyer was significant in that it brought to light efforts that had been made toward a combination of the various beryllium companies for the purpose of creating a monopoly. Dr. Sawyer was careful to leave the impression with the committee that he had opposed all suggestions of combination or even of any kind of cooperation between his company and Beryllium Corporation. The proposals for combination came from an unusual source. Representatives of Siemens and Halske in the United States made the proposals in behalf of the German company. The contract that Siemens and Halske had with the

Beryllium Corporation concerning the exchange of patents and information contained a clause providing that Beryllium Corporation should pay a royalty to the German Company for the use of its patents and that the German company should in turn pay Beryllium Corporation a royalty for patents owned by Beryllium Corporation. This odd provision had been placed in the contract to encourage each company to turn over patents to the other in order to obtain the royalty. The company that owned the most usable patents would have a "net royalty" in its favor. If the Beryllium Corporation had control of all the beryllium business in the United States or if it cooperated with other companies to its own advantage then it would also be to the advantage of the German company because more money could be collected from patent royalties.

But there was another—and probably more fundamental—reason why Siemens and Halske wanted the Beryllium Corporation to control the beryllium industry in the United States. It will be recalled that the Beryllium Corporation and Siemens and Halske had divided the more important industrial areas of the world between them for the purpose of creating exclusive sales territory for each company. The Beryllium Corporation could not sell its products in Europe except in England as provided in the later amendment to the contract. Brush Beryllium Company, on the other hand, would be free to sell anywhere in the world including the continent of Europe. The German company had the inside track on the beryllium business in Europe and naturally was opposed to any kind of "horning in" on its territory by companies in the United States. If it had been able to place the Beryllium Corporation in control of the industry in the United States then there would have been no danger of interference from this country.

Dr. Sawyer testified that his company had filled a few small orders in Europe but that their size was insignificant. The German company feared the possibilities of competition in the future.

V

The amount of beryllium that has reached the consumer in the finished product is comparatively small. The largest company, Beryllium Corporation, has handled about 1,000 tons of the metal

since it began commercial operations. This figure is more important than its size indicates in view of the fact that beryllium alloys usually contain only about 2 per cent beryllium. According to the testimony of the officials of the beryllium companies they do not yet know what their costs are or are likely to be in the future. Much money has been expended on research, patents and in building up a market. There is not yet any reliable basis on which to calculate costs. The myriad difficulties encountered in establishing a market for a new product and in creating a new industry have been evident in the beryllium industry from the start.

Price policies are necessarily based on crude approximations concerning costs and on opinions and guesses concerning the effects of certain prices on demand. The two major companies, Beryllium Corporation and Brush Beryllium, have maintained different policies based on opposing opinions concerning future effects of prices and of present costs. The policy of the Brush Beryllium Company is expressed in the testimony of its president as follows:

> We feel that the industry can only come into a real existence when the price is lowered sufficiently so that all concerned in the industry get sufficient volume to get away from the curse of the minute volume now existing.
>
> It is such a fact, that at every opportunity we have tried to get down to the point where the volume would build up; for instance, the rolling mills have rather a small volume, and that adds to their costs which, in turn, adds to the cost of the material to the ultimate consumer. That condition will have to be overcome always by large volume.[9]

This policy depends on the belief that there is an elastic demand for beryllium. There is good foundation for this belief in view of the many uses to which beryllium can be put if the price is brought within reach of consumers. It can be substituted for other metals that are inferior in physical properties. The vast possibilities are obvious. On the other hand, preliminary development expenses need to be covered and stockholders are restless for immediate returns on their investments.

The philosophy behind the price policy of the Beryllium Corporation is based more on the short run viewpoint. This is partly

[9] *Ibid.*, p. 2082.

because of the fact that the company has attempted to use prices as a means of recovering royalties on some of its patents. This point is borne out only by the higher price that the Beryllium Corporation has charged for its products. No royalties were collected directly. The testimony of Mr. Gahagan on this point follows:

> Our customers, in other words, we have taken this attitude with them. Instead of charging them a royalty for heat treating beryllium copper or charging them a royalty for using beryllium copper for specified purposes, these patents of ours, patents that we have taken over from the Germans, we have told them, you go ahead, and as long as they were customers of ours why we haven't thought of charging them anything at all. . . . We haven't charged a royalty for the patents themselves because I didn't want to create a sales resistance. Nobody likes to buy material and then have to pay you for using it.[10]

Mr. Gahagan was shy in his discussion of prices. He probably felt that he held a definite advantage in the industry because of his patents and that he should be able to capitalize on those holdings, at least to some degree. The record of prices on beryllium indicates that Brush Beryllium has led the way in every price reduction and that Mr. Gahagan has followed later and reluctantly.

Dr. Sawyer's company (Brush Beryllium) began the sale of beryllium at $25 per pound, the price the Beryllium Corporation was getting when Brush Beryllium started in the business. In 1935 Mr. Gahagan raised his price to $30 and kept it there until t he early part of 1937. Instead of following the price lead of Gahagan, Dr. Sawyer lowered the price to $23 early in 1936. It was not until January of the following year that Mr. Gahagan finally met this price. In 1939 Brush Beryllium again cut the price, this time to $15. Several weeks elapsed before the Beryllium Corporation met this new price. Thus, for several months over this period of time Brush Beryllium was selling the metal at a considerably lower price than Mr. Gahagan, yet Mr. Gahagan was able to maintain his market. This condition ap-

[10] *Ibid.*, p. 2049.

parently was because the metal manufacturing companies using beryllium felt obligated to Mr. Gahagan because they were using his patents—or what were claimed to be his patents—in the further processing of the metal. The customers also wished to keep more than one producer in the field to build up competition and to be assured of more than one source of supply. This point will be considered in more detail later.

It is evident that prices in the beryllium industry are as yet uncertain. They are not the result of the effective influence of cost and demand. Demand will have to be built up gradually and for a time, at least, will be more of a directed factor than an influence on price. A more permanent and settled basis on which costs can be calculated will have to be worked out. Such factors as expensive research, organization, acquiring of patents, patent litigation, rapidly changing methods and uncertain markets have made it impossible to set up demand and supply schedules.

VI

The beryllium companies discussed above do not manufacture the finished product that is sold to the assembly plant or the consumer. These companies produce what is termed the "master alloy" which is about 5 per cent beryllium. This alloy is sold to other metal companies that change the percentage of beryllium to fit their own needs in manufacturing the finished product. This step in the industry depends on many of the new beryllium patents mentioned above.

These "middlemen" producers in the industry have faced problems of production, distribution and pricing of beryllium that are probably more involved than in the original process. As in the first stage of the industry, there have been only two companies that have played a prominent role in the development of beryllium products. The more prominent of these two companies is the American Brass Company, a wholly owned subsidiary of the Anaconda Copper Mining Company, and the other is the Riverside Metal Company of New Jersey.

The American Brass Company has been the price-determining agency for finished beryllium products. It holds this position because of its size and position in its field. The major products

of the company are sheet, wire, rods, tubes and other fabricated metals. It does 25 per cent of the nation's business in which it is engaged.

It has been the policy of American Brass to buy beryllium from both the Beryllium Corporation and Brush Beryllium in order to maintain two sources of supply for beryllium and to create competition so that the price might be brought down.[11] American Brass wanted to buy in a competitive market and sell in a "fixed" market. This policy of buying from both companies continued even during the time that Gahagan was selling beryllium at $7.00 per pound more than his competitor. It is possible that American Brass felt obligated to Gahagan to some extent because of the patent situation, though the officials of the company claimed that this in no way influenced their buying policy.

The attitude of the American Brass Company toward beryllium and the Beryllium Corporation was changed two or three times. When the officials of the company were first told of beryllium by Mr. Gahagan and had demonstrated to them the vastly superior qualities of beryllium alloys over other alloys, they were very enthusiastic about the metal and its possibilities. They virtually assured Mr. Gahagan at that time that American Brass would use all the beryllium he could produce.[12] The chief metallurgist of American Brass was allowed to give much of his time and advice to Mr. Gahagan in the development of the metal and its alloys, and this fact led to the later claim by Mr. Judd of American Brass that his company had made some major contributions in the field of beryllium.

The unreconciled claims of Mr. Gahagan and Mr. Judd led to a cooling of relations between their respective companies. The changed attitude was further reflected in the action of American Brass in virtually cutting off its orders of beryllium from the Beryllium Corporation for a period of time.[13] Mr. Judd claimed that the reason for this action was that the company had accumulated a surplus of beryllium and that the market was very thin for beryllium alloy products, largely because of the excessively high price

[11] *Ibid.*, p. 2131.
[12] *Ibid.*, p. 2151.
[13] *Ibid.*

of the "master alloy." Another and probably more important reason for the action was the fear the officials had of the effect beryllium products might have on some of their more profitable metal products. The product they had the most concern for was phosphor bronze, an alloy of tin and copper that, up till the entrance of beryllium copper was virtually the strongest metal on the market. Other metals had been developed by American Brass and had brought the company much notoriety and profit. Moody's mentions the accomplishments of the company in this respect as one of its major contributions.[14] The officials, no doubt, took great pride in the metals they were already producing and were reluctant to accept changes that would involve the scrapping of valuable machinery and the investing of large amounts of capital in new machinery and methods.

Evidence of this attitude toward beryllium was presented to the committee in the form of a letter written by Mr. Judd to another official of the company which read in part, ". . . the price which we expect to charge for beryllium bronze should be sufficient to protect our present trade in phosphor-bronze, and . . . beryllium bronze should be confined to the field of heat treating purposes."[15]

A memorandum of a conversation between Mr. Judd and Mr. Gahagan stated in part, "Mr. Judd explained that the price increase had been made because they felt that beryllium copper was competing with a number of their products and they were not interested in developing it beyond taking care of the customers they now had."[16]

These statements indicate that American Brass proposed to squeeze out a new and better metal by the simple expedient of "price prohibitiveness." In further testimony the officials of the company made the point that they later changed this attitude toward beryllium and had decided the best thing to do was to keep the price as low as possible in order to develop the market. After committing themselves to this new policy they lent considerable encouragement to Dr. Sawyer in the development of Brush Beryllium. Because of this active encouragement American

[14] *Moody's Manual of Investments, Industrials*, 1940, p. 3080.
[15] TNEC *Hearings, op. cit.*, p. 2119.
[16] *Ibid.*, p. 2118.

Brass had a sort of obligation toward Brush Beryllium in buying its raw material.[17] After this time, American Brass patronized both companies in securing its beryllium supplies.

The prices of beryllium alloy finished products play a major part in determining the amount of beryllium sold and consequently the whole position of the beryllium industry. The manner in which these prices are determined is somewhat obscure, but it is fairly certain that the American Brass Company has been the dominating influence here if not the price leader. Mr. Randall of Riverside Metal testified that his company followed the prices of American Brass. It was denied, however, by Mr. John A. Coe, general sales manager of American Brass, that his company was the price leader in its field.[18] It is significant that the committee had great difficulty in getting Mr. Coe to be specific on the subject of how prices were fixed or determined in his industry.

This and other revelations in the testimony force the conclusion that there has been little competition in the beryllium industry. It should be noted, however, that beryllium is yet a toddling infant and has not operated under conditions that justify definite judgment on the industry. The companies that have handled the "master alloy" claim that no profit whatever has yet been made on beryllium products but that, on the contrary, costs have not been even approximately covered.

In consideration of the amount of money, time, and effort already invested in the industry and of the amazingly revolutionary qualities of many of the alloys of beryllium, it seems that the possibilities of the industry toward influencing the industrial economy of the future are almost without limit.

[17] *Ibid.*, p. 2131.
[18] *Ibid.*, p. 2094.

THE COST OF LEGAL RESERVE LIFE INSURANCE

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The Temporary National Economic Committee has issued 37 hearings and 44 monographs. Among the mass of primary data on the operations of American industry thus supplied are six hearings and two monographs dealing with life insurance.[1] The ostensible purpose of the committee was to study the mechanics of all American business and industry, but the committee's investigation devoted a disproportionate amount of its energies to the problems of legal reserve life insuring, and in years to come is more apt to be remembered as the federal investigation of insurance than as a study of the concentration of economic power in the modern community. In many ways the TNEC investigation of life insurance was only a continuation of the Armstrong Report of 1905,[2] but the implications of the TNEC investigation are considerably more far-reaching. The Armstrong Committee criticised vigorously the managerial policies of 15 companies and suggested stringent regulation of company practices; the TNEC criticises the whole industry, and if its criticisms should be accepted as valid, and should a code of reform be based upon them, the technique of insuring would be changed radically, perhaps to such an extent that private insuring would no longer continue.

I

The TNEC study developed as an indictment. In the first place, the insurance companies are pictured as mechanisms for the

[1] Investigation of Concentration of Economic Power, Temporary National Economic Committee, *Hearings*, Parts 4, 10, 10a, 12, 13, 28, and Monograph No. 28, "Study of Legal Reserve Life Insurance Companies."

[2] Report of the Joint Committee of the Senate and Assembly of the State of New York, appointed to investigate the affairs of life insurance companies, Albany, New York, 1906.

concentration of tremendous financial power.[3] The legal reserve system necessarily accumulates funds, for legal reserve insuring involves the combination of decreasing insurance coverage with increasing saving. At present the companies control over $28 billions of assets as reserves and surplus behind the $110 billions of insurance in force, and even should they write no more insurance, their assets would continue to accumulate. Although the majority of the large companies are organized on the mutual basis, and policyholders are thus extended the right to control the policies of the companies, policyholders actually exert very little control over the management of the companies. The directors of the companies are self-perpetuating, and nothing that the policyholders could do would be likely to unseat them. Many of the "outside" directors pay scant or no attention to their directoral duties, and those executives of a company who are also directors therefore control the destinies of the company practically without supervision from the owners of the funds.[4] The insurance industry thus is a medium by which tremendous financial power is concentrated in the hands of a management which is self-perpetuating and very apt to be divorced from the policyholder in interests and in point of view. The investigation also indicates that the insurance interests are closely allied with the banking interests, so that a coalition of vast financial power is accomplished. There is further suggestion that the power thus conferred upon the joint banking-insurance managements is used occasionally for selfish purposes and always to determine the direction of investment in accord with the preconceptions of the financial groups.

The second criticism concerns the method of pricing which the companies have used. According to the hearings, there has been considerable collusion among the majors in pricing. A small number of the companies control a majority of the assets of the insurance industry, write a majority of the insurance written, and account for the majority of the insurance in force. Five of the companies control over 54 per cent of the total assets; 26 control over 87 per cent of them.[5] The geographical proximity of the

[3] Monograph No. 28, Part II, pp. 5–13.
[4] *Ibid.*, Parts III–VI, pp. 13–64.
[5] TNEC *Hearings*, Part 4, "Life Insurance," pp. 1514, Exhibit No. 222.

managements of the largest companies (most of them are in New York City, Hartford, Connecticut, and New Jersey) and the close association of the managements through associations of actuaries, have sponsored cooperation in pricing.[6] Policy premiums have been standardized and policy guarantees made uniform so that price competition has been substantially avoided. As a result, an oligopolistic situation has been created, and the community has retained no very strong assurance that the advantages of monopoly have not been realized through unnecessarily high premium rates. The investigation thus infers that regulation is in order. The testimony's frequent reference to the public utilities as comparable to the insurance companies is very suggestive.

The third criticism concerns the effect upon the community of insurance companies' saving. Here one must be familiar with Keynes' *General Theory*[7] to appreciate the import of the criticism. Keynes insists that the propensity of the modern community to consume is such that a greater quantity of funds is saved than can be moved into investment and restored to purchasing channels, since the interest rate does not respond sufficiently to clear the saved funds. A strong case can be built against the insurance companies on the basis of Keynes' thesis, for the companies effect contracts which result in saving which is not responsive to the interest rate, and they move those funds into investment channels which could not be described as "venturesome." The investigation infers that the insurance industry contributes to stagnation in the community when it emphasizes the huge savings which the industry accomplishes and points out that those almost automatic savings from funds which ordinarily might be consumed are not available for entrepreneurial ventures, but are limited to the purchase of bonds and mortgage loans.

The fourth criticism concerns the cost of insurance. The investigators suggest that the cost of insurance is too high. They compare the net cost of insurance on individual policies issued by the large companies with the net cost of insurance offered by the Massachusetts Savings Banks, a comparison which is definitely to the detriment of the companies. They also point to the high

[6] Monograph No. 28, Part XI, pp. 141–160.

[7] John Maynard Keynes, *General Theory of Employment, Interest and Money*.

lapse rate, and illustrate that a high lapse rate causes heavy costs to the purchasers of insurance. They go further and criticize the pressure selling of insurance and the emphasis upon volume production which characterizes the managerial policy of the majors, and in particular they criticize industrial insurance as wasteful in the extreme, imposing upon the poor, as it does, a technique of insuring which is excessively inefficient.[8]

There are other criticisms, but the four mentioned are the ones given emphasis. Perhaps another should be added. The reports and the monographs infer strongly that state regulation of insurance is ineffective, allowing "fly-by-night" companies to organize at an extreme cost to those who buy policies in them.

II

One perspective seems to have dominated the whole TNEC investigation: the "anti-monopoly," "anti-bigness" philosophy. Concentration of economic power was apparently accepted as per se bad. In the investigation of life insurance companies the emphasis was placed upon their great size, their tendencies toward rapid and cumulative growth, and their inclination to cooperate with one another and thus further concentrate power. The bigness of life insurance companies may be criticised on two counts: one, that their size concentrates financial power in a fashion inimicable to a free, competitive system; two, that their large size leads to inefficiency. The first criticism would lead us into too broad a discussion. Here we shall investigate only the second. The large companies continue to grow rapidly,[9] and since their managements consider further growth advantageous, they will strive to continue to grow. If they have already attained a size beyond the point at which the lowest costs of operation are realized, their further growth should be deterred and the smaller companies' growth should be encouraged. It is important, therefore, to determine whether insurance companies operate under increasing or decreasing costs, and particularly important to ascertain if the major companies have grown beyond the point of optimum efficiency.

[8] Monograph No. 28, Parts XVI and XVII, pp. 235–288.

[9] Monograph No. 28, pp. 9–10, for a discussion of the factors contributing to the growth of the companies.

The cost of life insurance to the community is the cost of running the legal reserve life insurance system. Obviously, if the mortality experience of the community improves, or if the yield on acceptable investments improves,[10] the cost of insurance will fall; but neither of those factors is influenced by company size. The "best," in fact the only way to measure the effect of company size upon the costs of operating the insurance industry is to determine the per cent of premiums which is devoted to operating activities in companies of various sizes. The operating costs[11] which the companies experience fall into two categories: the costs associated with selling insurance and "putting it on the books," and the costs arising from maintaining the insurance in force, collecting renewal premiums, servicing the policies, and making eventual settlement. The annual reports of the life insurance companies do not allocate total expenses to acquisition and maintenance, but such an allocation is necessary for a proper comparison of the experience of the companies.[12] An allocation of expenses of the companies between acquisition and maintenance was made for this study. The cost-of-acquisition experience of the various companies and groups of companies has been reduced to a figure which is comparable, the percentage of first year premiums represented by acquisition expenses, i.e., total acquisition expenses divided by total first year premium income. That per cent is referred to throughout the paper as the "acquisition ratio."

[10] That is, acceptable as investments for insurance companies, which are interested in maximum stability of the principal.

[11] The operating expenses reported in the annual statements of the companies are "new and renewal commissions," "salaries and expenses of agents," "medical fees and inspections," "salaries of officers and employees," "rents," "real estate repairs," "other management expenses," "insurance taxes," "real estate taxes," "licenses and fees."

[12] For purposes of this study the allocation of expense items was made as follows:

Reported Expense	% to Acquisition	% to Maintenance
Commissions, new	100	0
Commissions, renewal	0	100
Salaries and expenses of agents	70	30
Medical fees and inspections	90	10
Salaries of officers and employees	30	70
Rents	30	70
Real Estate Repairs	0	100
Other Management expenses	30	70
Insurance Taxes, licenses and fees	20	80
Real Estate Taxes		100

Maintenance cost experience has been treated in similar fashion. Total maintenance costs have been divided by total renewal premium income to determine the ratio of maintenance costs to renewal premiums. That per cent is referred to throughout the paper as the "maintenance ratio." Investigation of the acquisition costs and maintenance costs of the 330 legal reserve companies operating in the United States in 1935 and 1938[13] reveals a surprising dispersion in the cost experience of the companies. In 1938 the ratio of maintenance costs to renewal premiums, the "maintenance ratio," varied from 8 per cent to 99 per cent. In other words, companies serviced policies already in force at costs from 8 cents for every dollar of renewal premiums collected to 99 cents for every dollar of renewal premiums collected. It should be observed that costs of "servicing" does not include either payment of claims or surrenders or creation of the reserve. In 1938 the ratio of acquisition costs to first year premiums, the "acquisition ratio," varied from 14 per cent to 1,846 per cent, or to rephrase the relationship, companies expended in selling insurance as little as 14 cents and as much as $18.46 for every dollar of first year premiums collected.

III

When the cost experiences of the 330 companies are compared, it is apparent that the large companies have an appreciable advantage as far as operating experience is concerned. When the acquisition ratios and the maintenance ratios of the companies are related to their size measured by amount of insurance in force, it is evident that in so far as operating costs are concerned, the insurance industry is a decreasing cost industry. Table I compares the average cost experiences of 230 ordinary companies in groups of ten ranked by amount of insurance in force as of December 31, 1935. Average "decile ranks" are presented as well as averages of the acquisition and maintenance ratios of the companies. To derive the "decile ranks" the companies were ranked by the size of their cost ratios and assigned their appropriate decile number.

[13] Taken from the *Spectator Yearbooks of Life Insurance*, Summary of Life Insurance Company Annual Statements, 1936 and 1939, Volumes on Business of 1935 and 1938. Including industrial companies.

Thus the 33 companies with the smallest ratios are "decile one" companies, the 33 with the next smallest ratios are "decile two" companies, and so on. The companies were then ranked by size

TABLE I

COMPARISON OF THE AVERAGES BY TENS OF COMPANIES, RANKED BY AMOUNT OF INSURANCE IN FORCE AS OF DECEMBER 31, 1935, OF THE RATIOS OF ACQUISITION COSTS TO FIRST YEAR PREMIUMS AND MAINTENANCE COSTS TO RENEWAL PREMIUMS FOR THE YEARS 1935 AND 1938; AND COMPARISON OF THE AVERAGES OF THE DECILE RANKS OF THE COST RATIOS OF THE COMPANIES, BY TENS OF COMPANIES RANKED BY SIZE, AMONG THE 230 COMPANIES REPORTING IN 1935 AND 1938

Companies selling industrial insurance excluded[14]

GROUPS OF TEN COMPANIES IN ORDER BY AMOUNT OF INSURANCE IN FORCE AS OF DECEMBER 31, 1935	AVERAGE OF DECILES OF RATIOS OF MAINTENANCE COSTS TO RENEWAL PREMIUMS		AVERAGE OF RATIOS OF MAINTENANCE COSTS TO RENEWAL PREMIUMS		AVERAGE OF DECILES OF RATIOS OF ACQUISITION COSTS TO FIRST YEAR PREMIUMS		AVERAGE OF RATIOS OF ACQUISITION COSTS TO FIRST YEAR PREMIUMS	
	1935	1938	1935	1938	1935	1938	1935	1938
1st 10 (largest)	1.5	1.9	15.7	17.1	2.4	1.9	93.4	69.0
2nd 10	2.6	2.8	20.6	20.0	2.3	3.1	80.7	91.3
3rd 10	3.5	3.3	22.6	20.9	3.1	4.5	94.4	108.1
4th 10	4.9	4.5	25.0	28.0	4.4	3.8	113.3	102.2
5th 10	3.5	3.2	22.1	20.1	4.9	4.3	140.7	117.0
6th 10	3.2	4.5	22.1	24.2	5.6	5.1	167.5	119.4
7th 10	4.6	4.9	26.4	26.3	4.5	4.3	116.7	108.5
8th 10	4.9	5.4	26.4	26.9	5.0	4.7	123.2	122.9
9th 10	3.8	3.4	23.2	21.3	3.7	4.3	99.1	107.9
10th 10	5.3	5.6	28.8	28.0	5.5	4.9	169.1	118.9
11th 10	4.7	4.9	27.1	26.1	4.6	4.5	116.3	112.7
12th 10	5.2	6.2	28.5	29.8	6.1	6.9	145.0	158.1
13th 10	4.8	4.5	27.6	25.7	5.6	7.1	137.3	243.4
14th 10	4.3	5.6	24.5	27.1	6.1	7.1	139.3	164.4
15th 10	6.8	6.8	38.5	33.7	4.8	5.0	120.6	130.8
16th 10	6.8	6.0	37.4	32.7	7.0	6.3	183.5	143.9
17th 10	5.1	5.0	30.4	24.9	6.3	6.1	147.8	150.3
18th 10	7.5	6.4	40.3	33.1	5.8	5.3	156.8	132.1
19th 10	7.6	8.2	44.0	46.3	5.5	6.2	159.0	202.3
20th 10	6.0	6.0	37.8	32.5	5.3	5.3	149.8	129.0
21st 10	7.0	8.6	46.8	43.6	5.4	7.3	129.1	200.1
22nd 10	8.5	8.0	67.1	55.0	4.4	4.0	112.1	101.0
23rd 10	5.2	4.3	28.7	34.0	4.5	3.0	188.8	88.9

and the average "decile rank" and the average cost "ratios" for the companies in groups of ten were computed. The ratios in-

[14] As computed for this study and as derived from the reproduction of the annual statements of the companies for 1935 and 1938, as reported in the *Spectator Life Insurance Yearbooks*, 1936 and 1939.

dicate the exact per cent of premiums which are devoted to servicing the policies; the decile rank is a useful index to the comparative efficiency of a company or a group of companies.[15]

A reference to the table indicates that the larger companies on the average were more efficient than the smaller companies. When the columns of the table are plotted as cost curves, the decreasing cost experience of the industry is indicated conclusively. It is evident that most of the larger companies benefit from economies

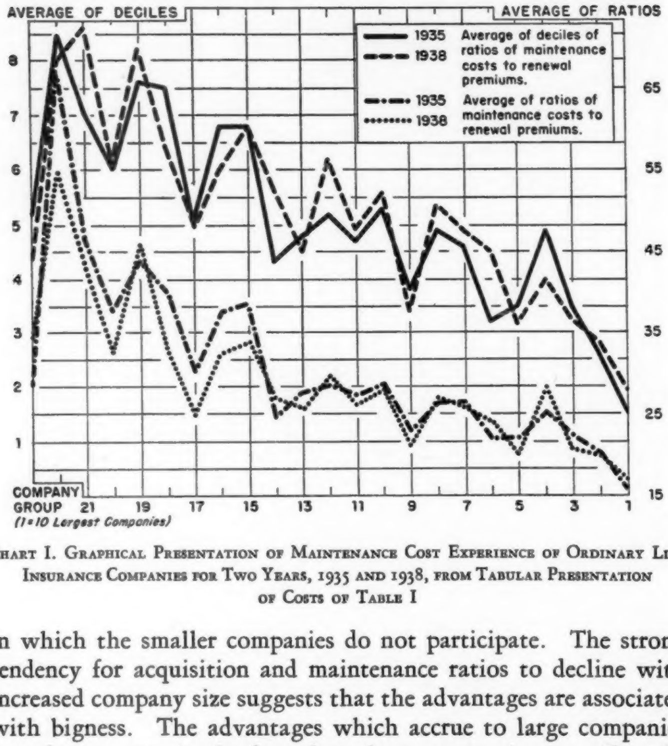

Chart I. Graphical Presentation of Maintenance Cost Experience of Ordinary Life Insurance Companies for Two Years, 1935 and 1938, from Tabular Presentation of Costs of Table I

in which the smaller companies do not participate. The strong tendency for acquisition and maintenance ratios to decline with increased company size suggests that the advantages are associated with bigness. The advantages which accrue to large companies are of two sorts: in the first place, large companies can effect the economies arising from specialized use of machines and labor,

[15] All computation based upon the annual insurance reports of the companies as reproduced in the *Spectator Life Insurance Yearbooks*, 1936 and 1939.

intensive use of buildings, intensive use of other equipment and labor, and coordination of functions on a large scale; in the second place, and by far the more important factor, the larger companies generally have much smaller commission expenses per dollar of premium income than do the smaller companies. The difference in commission costs is the result of differences in the contractual guarantees offered by the companies. The larger companies in almost all instances offer lower commission rates to their agents than do the smaller companies. One might conclude that the variation in cost experience between the large companies and the smaller ones was therefore purely a matter of contract and habit, and not of size; but such a conclusion is not warranted. An agent finds association with an old and large company assists him in selling and therefore justifies a smaller commission guarantee. If smaller companies wish to attract agents from the larger companies or retain their own agents, they must offer higher commission guarantees than those offered by the "majors." Table II presents the average of decile positions in ratios of first year commissions paid to first year premiums received among the 230 companies selling ordinary insurance only by groups of tens of companies, ranked by size. It is evident that the 20 largest companies have an important advantage accruing to them because of their lower commission payments.[16]

It does not follow that all of the large companies operate at the most efficient ratios. Table III, which presents the cost ratios of the 28 largest companies writing ordinary insurance only, illustrates the wide dispersion in cost experience among the large companies. But although the dispersion is great, the majority of the companies in the group have low ratios. In only one instance did any of the 28 companies have maintenance ratios as large as the maintenance ratios of the 50 per cent of the companies with the

[16] The largest companies probably sell a greater proportion of endowments, annuities and limited pay policies than do the smaller companies, and since in all companies it is customary to offer smaller commissions on such policies than on ordinary-whole life, commission costs are thus comparatively lower for the larger companies than for the smaller. However, the most important influence is the one mentioned in the main part of the manuscript. The smaller companies generally offer larger commission guarantees than do the 20 large companies, on the same policy types.

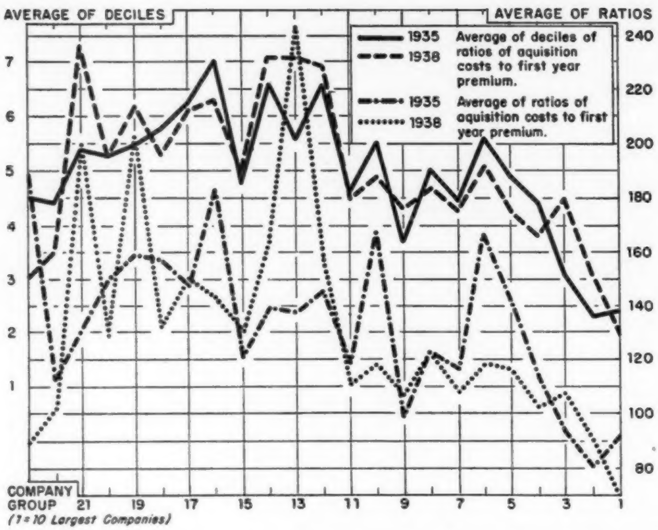

CHART II. GRAPHICAL PRESENTATION OF ACQUISITION COST EXPERIENCE OF ORDINARY LIFE INSURANCE COMPANIES FOR TWO YEARS, 1935 AND 1938, FROM TABULAR PRESENTATION OF COSTS OF TABLE I

TABLE II

AVERAGE DECILE POSITION AMONG THE 230 ORDINARY LIFE COMPANIES, BY TENS OF COMPANIES, RANKED BY INSURANCE IN FORCE AS OF DECEMBER 31, 1935, AS REGARDS THE RATIO OF FIRST YEAR COMMISSION PAYMENTS TO FIRST YEAR PREMIUM INCOME, FOR THE YEARS 1935 AND 1938[17]

GROUPS OF COMPANIES	1935	1938
1st 10 (largest)	2.6	1.3
2nd 10	2.4	2.4
3rd 10	3.4	3.6
4th 10	4.6	3.8
5th 10	5.2	4.7
6th 10	5.8	4.9
7th 10	6.0	5.0

highest ratios, and in most instances, the companies ranked in the best 30 per cent.

[17] As computed for analysis of company performance as presented in the *Spectator Life Yearbooks*, 1936 and 1939.

TABLE III

SCHEDULE OF THE EXPERIENCE OF THE 28 LARGEST LEGAL RESERVE LIFE INSURANCE COMPANIES, INDUSTRIAL COMPANIES EXCLUDED, RANKED BY AMOUNT OF INSURANCE IN FORCE, DECEMBER 31, 1935

Presenting the maintenance and acquisition ratios and the decile position of the ratio experiences among the 330 companies in the classification, by company and by years, both 1935 and 1938[18]

COMPANIES	DECILE POSITION OF MAINTENANCE RATIOS		MAINTENANCE RATIOS		DECILE POSITION OF ACQUISITION RATIOS		ACQUISITION RATIOS		AMOUNT OF INSURANCE IN FORCE, 1935
	Year								
	'35	'38	'35	'38	'35	'38	'35	'38	$1,000s
New York Life	1	2	14	18	1	2	62	78	$6,620,881
Equitable, N. Y.	2	2	17	18	1	3	58	98	4,694,311
Mutual Life, N. Y.	1	1	11	13	9	1	366	51	3,708,081
N. W. Mutual, Wis.	1	1	15	14	1	1	41	41	3,705,020
Travelers, Conn.	1	1	15	14	4	5	104	120	2,712,866
Mutual Ben., N. J.	2	2	17	19	1	1	39	29	2,005,498
Aetna, Conn.	1	1	14	14	2	2	72	87	1,883,293
Mass. Mutual, Mass.	2	4	18	24	2	1	73	63	1,851,447
Penn. Mutual	3	3	21	21	2	2	75	78	1,839,599
N. Eng. Mutual, Mass.	1	2	15	16	1	1	44	45	1,329,397
Union Central, O.	2	3	20	21	3	5	103	124	1,145,205
Prov. Mutual, Pa.	2	2	18	19	2	3	74	90	934,937
Conn. Mutual	2	2	19	18	1	1	50	66	914,157
Lincoln Nat'l., Ind.	4	3	23	20	3	2	88	77	825,799
Conn. Gen., Conn.	1	3	18	20	1	1	55	63	746,960
Bankers Life, Ia.	1	2	16	16	2	2	74	71	723,166
Pac. Mutual, Cal.	3	3	21	21	5	7	127	148	636,856
Phoenix M., Conn.	6	2	31	19	1	2	65	75	589,864
State Mutual, Mass.	3	5	21	26	3	3	87	89	567,339
Equitable, Ia.	2	3	19	20	2	5	84	110	548,338
Natl. Life, Vt.	4	4	23	22	1	1	55	68	510,025
Guardian, N. Y.	5	3	26	20	2	2	75	86	454,144
Gen. Amer., Mo.	7	5	34	26	7	8	162	186	409,068
K. C. Life, Mo.	4	4	23	22	4	6	115	132	384,587
Fidel. Mutual, Pa.	4	5	25	26	1	2	65	86	356,720
Home Life, N. Y.	3	3	21	21	2	4	85	102	353,713
Acacia Mutual, D. C.	2	4	19	22	5	5	117	122	352,092
Jeffer. Stan., N. C.	2	1	18	15	4	5	113	115	329,626
3 Largest Industrial									
Metropol., N. Y.	1	2	15	16	8	9	174	242	$10,483,415
Prudent., N. J.	3	3	21	20	2	4	84	99	7,903,452
J. Hancock, Mass.	1	5	15	25	8	7	177	162	1,854,488

[18] As computed for analysis of company performance from annual statements as presented in the *Spectator Life Yearbooks*, 1936 and 1939.

IV

There are three possible directions toward which reform of insurance could move. The simplest would be to issue the insurance companies' charters under federal law and to regulate them through a federal department. At present such a modification of practice is forestalled by the Supreme Court decision of *Paul* v. *Virginia*[19] which specifically classifies insurance as "not commerce," and therefore not a subject for federal regulation. Of course the court could reverse itself, and probably would, if given an opportunity. Concentration of financial power under federal supervision would require careful supervision of pricing practices and management methods. The transition to federal regulation need not be particularly drastic. State regulatory bodies might be retained, and the agency system probably would not be disturbed. The possible objection that competition would thus be destroyed is not a very strong one, since pure price competition is not characteristic of the insurance industry. The primary advantages of federalization of regulation would be increased efficiency of regulation. One body would prescribe the rules for all divisions of the country, the number of reports required of the companies could be minimized, and accounting routines in the companies could be simplified. Furthermore, the regulation could be more effective. Many of states now regulate haphazardly. If federal prescription of rates and performance is introduced, it would be well to limit the number of companies chartered to 50, or less, so that the regulatory problem could be further simplified and so that all of the operating companies could benefit from the economies of large-scale operation. Nothing is gained by having 330 companies. The high unit cost of operating on a small scale prevents the small companies from competing with the established majors. Their presence serves no particular purpose other than to support a larger number of managers and agents than is actually needed. Seventy-five per cent of the companies now operating in America could be eliminated without depriving the consumer of a single opportunity. Federal regulation would make their elimination possible. A further, wide departure from common practice could be made;

[19] 1868, 8 Wall. 168.

the number of companies operating in an area could be limited. The average insurance purchaser chooses his policy from among two to five companies, although he generally has 20 to 50 to choose among. He would not be penalised by a limitation upon the number of companies operating in his locality, and should he wish to insure in a company not chartered to operate an agency in his district, he could always arrange with a broker for purchase of a policy through another district. The limitation upon numbers of agencies would enable the companies to specialize their services and use their agency forces more intensively. They could revise their agency systems in the interest of economy, lowering commission costs, but at the same time giving their salesmen a better opportunity to earn good incomes. The present agency organization imposes heavy acquisition and maintenance costs upon the companies. An avoidance of a portion of the intense service competition by quasi-monopoly grants in localities would lower costs appreciably.

A second possibility would be to restore competition and limit the size of the companies so that monopoly control could not be achieved by a few large organizations. There would be three serious objections to such a move. In the first place, it would be accomplished only at the cost of extreme readjustment of company methods. Large companies would perforce liquidate a portion of their agency systems and reinsure large blocks of their business if their size and rate of growth were restricted. The second criticism is a more significant one. It is doubtful if competition could accomplish the desired ends in the insurance enterprise, for it would be more likely to lead to cut-throat practices which would expand costs than to efficiencies which would lower expenses. Thirdly, a reduction of size would prevent the realization of the economies of size which arise in the larger companies. In short, insurance is very close to being a "natural monopoly," and an attempt to impose competition upon it would lead to inefficiencies and high costs.

The third possible reform would involve socialization of the insurance business. The social security system already exists as a medium through which insurance could be effected. The post-office system could also serve as a medium of insuring. Socializa-

tion of the insurance service would have advantages. It would lead to a great reduction in operating costs by realization of the maximum possible efficiencies arising from size. Government agencies which already exist would simply be used more intensively. The services rendered would be standardized, and the maximum stability for policyholders would be achieved. Two important objections immediately are evident. A tremendous additional service would be assumed by government. Those who fear concentration of control in the central government would certainly oppose the plan. Socialization would necessarily destroy the private insurance industry, and force a serious readjustment upon the community. Furthermore, there is strong evidence that insurance must be sold by personal approach. If the socialized system did not rely upon an agency system it might sell very little insurance.

There is a fourth possibility. Insurance could be sold through cooperatives—either through mutual savings banks or through unions and professional associations. The primary benefit would be lower costs through elimination of the agency system and insurance commissions, but three disadvantages would be present: a large portion of the community would not have access to such insurance; the services of the insurance agent as a consultant would be lost; the average size of the insuring unit under such a plan would be small, and the economies of large-scale operation would not be realized.

The comparison of the cost experiences of the companies leads us to reject any reform which would lead to a limitation of company size, and suggests a legislative policy which would deter the small companies from remaining in the field. There would be advantages which would accrue from an oligopoly of insurance by a small number of companies. In the first place, operating costs would tend to fall, for the companies could economize in their use of agents, using their agency force more intensively and emphasizing the consulting aspects of agency work rather than the selling aspects. In the second place, regulation of insurance by the state would be simplified. Three hundred and sixty-five companies reported in the United States in 1938; 132 reported in Texas; each state supervises an average of 82.[20] But 25 companies control 87

[20] Monograph No. 28, "Study of Legal Reserve Life Insurance Companies", p. 5.

per cent of the insurance assets and 75 account for all but a very small fraction of the insurance in force. Of the remaining companies, only a few can hope to compete successfully, yet each imposes a regulatory burden upon the state.[21]

The large companies have their faults. They have concentrated financial power, collaborated in pricing agreements, divorced the ownership of insurance funds from the management of the funds, and created a group of self-perpetuating managers who are independent of policyholder control. They have emphasized volume sale of insurance, oftentimes to the detriment of policyholders, who have been pressured into buying insurance which was foreordained to be lapsed at a loss to the policyholder and the company. The large companies have serious faults, but from the point of view of efficiency of operation, size is not one of them, for there is an apparent close correlation between size and economy of operation in the legal reserve insurance enterprise, and strong evidence that the optimum size has not yet been reached.

This study does not propose to point the way for regulation. It has considered only one point—cost of operation as it is related to the size of the insuring unit. But it does point part of the way fairly clearly, for it indicates quite conclusively the decreasing cost tendencies of the insurance enterprise, and it indicates also, that the point of optimum efficiency has not yet been attained by even the largest companies. Perhaps concentration of economic power is bad; the author has not chosen to consider that problem—but bigness is apparently good, and that statement can be verified by pointing to the lower costs of operation which the larger companies experience. If regulation is to be extended, and if efficiency is to be one of its objectives, then the majors should be allowed to continue their growth, and perhaps the smaller companies should be forced to relinquish their business to the majors, unless they could prove that some extraordinary advantage which favored them enabled them to extend their service without imposing additional costs upon the community.

[21] Over 500 legal reserve companies merged or reinsured with another company between January 1, 1910 and December 31, 1939. They were all small companies; many of the changes imposed losses upon the policyholder. See Best's *Life Insurance Reports*, 1940, 55th Annual Edition, p. XLIII.

SHORT-RUN EQUILIBRIUM IN THE BALANCE OF PAYMENTS

HARRY H. BELL

Fort Jackson, S. C.

The field of foreign exchange, of all the branches of economics, has probably been most radically transformed by the events of the past two years. Not only have blocking restrictions and other limitations on capital movements become almost universal but the whole mechanism of exchange rates has been changed by the institution of an official monopoly of exchange dealings in most countries of the world. Thus, for example, the international movement of gold has ceased to be associated primarily with gold-shipping-point arbitrage. Forward exchange premiums and discounts have lost their customary significance, and their fluctuation no longer induces a flow of interest-arbitrage or "swap" funds. Finally, the negotiation of bilateral payments agreements and the institution of other discriminatory policies have divided what was once a global balance-of-payments problem into a number of individual segments, broken down on a basis of more or less independent geographical and currency areas.

These manifold institutional changes would in themselves indicate the advisability of reconsidering the theoretical and technical aspects of international financial relationships, with particular reference to the interpretation of balance-of-payments estimates. It might be remembered in this connection that the last general discussion of the subject was inspired by the great controversies over the transfer of large unilateral payments, at first in connection with long-term investments (*e.g.*, Hobson, Williams, Viner), later with respect to the specific problem of German reparations (Keynes, Ohlin, *et al.*). Today these controversies have an archaic and academic ring, although they explain the preoccupation with capital movements as a whole which has characterized most presentations of the balance of payments during the past 25 years. The practical problems of foreign exchange at present, however, are

concerned primarily with obtaining and conserving foreign currency resources, from whatever source derived, for the purpose of financing all necessary outpayments, whatever their nature. Among the various transactions, the importance of the movement of certain commodity trade items—foodstuffs, raw materials, and war materials—has been accentuated and made more apparent to everyone. On the other hand, the roles of the distinct types of credit transactions have come to differ so radically as to make it entirely meaningless to lump them together.

I

The shortcomings of customary balance-of-payments classifications can be demonstrated by a comparison of two alternative methods of presenting the data released by Secretary Morgenthau on January 21, 1941, concerning sterling-area gold and dollar transactions during the first 16 months of the war. These figures, which were prepared by experts of the British Treasury, are particularly interesting for several reasons and deserve more attention than they have thus far received. In the first place, it is, of course, most unusual that such complete and normally highly confidential details on the operations of the Exchange Equalization Account should be made public, particularly by a nation at war. Secondly, the figures constitute, not the United Kingdom's total balance of payments, but a balance of payments drawn up for the whole sterling area vis-a-vis a particular group of foreign currencies (gold, U. S. dollar, and Canadian dollar). Finally, the data, as made available to the Congressional committees considering the Lend-Lease Bill, are not divided up in the usual categories (such as current and capital account), but are rather presented in roughly the fashion indicated in the accompanying greatly abbreviated table (Table I). The first half of the tabulation is thus merely an orderly list of the requirements for which foreign means of payment had to be made available by the British authorities, directly or indirectly,[1] during the period. The second half lists the more or

[1] The item "D. Withdrawal of Capital" includes $300 million withdrawn indirectly by Americans and others through the free market for sterling. It must be presumed that the British considered this a necessary exchange loss, suffered voluntarily in order to maintain London's financial prestige; otherwise the loophole would have been plugged much earlier than spring, 1940.

less normal, although not necessarily recurring sources of foreign exchange available to meet the foregoing expenditures. The difference, or deficit, is then made up by an item representing the net amount by which the sterling area's original gold and dollar exchange resources (including mobilized securities and short-term funds) had to be depleted.

It can be seen that this form of presentation has the advantage of making clear the nature of the actual exchange problem faced

TABLE I

GOLD AND DOLLAR TRANSACTIONS OF THE STERLING AREA, SEPTEMBER, 1939–DECEMBER, 1940

	MILLIONS OF DOLLARS
Gold and Dollar Expenditures	
A. Payments to the United States by United Kingdom	2,282
B. Payments to the United States by Empire countries, excluding U. K. and Canada	483
C. Payments by Empire countries, excluding Canada, to areas outside the U. S. requiring gold or dollars	775
D. Withdrawal of capital	735
E. Residual—Miscellaneous items and errors of estimation	71
Total gold and dollar requirements for all transactions	4,346
Gold and Dollar Receipts	
A. Receipts from United States by United Kingdom	345
B. Receipts from United States by Empire countries, excluding U. K. and Canada	670
C. Dollar receipts by Empire countries, excluding Canada, from areas outside the U. S.	50
D. Receipts from sale of Empire gold (new production and dishoarding)	965
Total gold and dollar receipts by Empire countries, excluding Canada	2,030
Total drain on gold and dollar resources of British Empire, excluding Canada and Newfoundland, Sept. 1, 1939 to Dec. 31, 1940	2,316
Total gold and dollar requirements for all transactions	4,346

by the British, as seen from the perspective of the responsible authorities themselves. In contrast to this, the same figures, if rearranged according to ordinary balance-of-payments procedure, such as that used by the Department of Commerce, would seem to give a much less realistic picture. Such a tabulation of the British Treasury data—again considerably abbreviated—is Table II.[2] In

[2] Cf. Federal Reserve Bank of New York, *Annual Report, 1940*, p. 37. Total figures do not correspond with those in Table I above, owing to inclusion of gross, rather than net, transactions with Canada.

this table, it should be noted, the capital account includes not only the withdrawal of foreign funds from the United Kingdom, but also such disparate debits and credits as advances and "capital assistance" payments to American manufacturers (which in the Treasury compilation are included together with other payments associated with merchandise ordered from the United States); the reduction of short-term British holdings in New York; and the liquidation of British-owned American and Canadian securities.

TABLE II

GOLD AND DOLLAR BALANCE OF PAYMENTS OF THE STERLING AREA, SEPTEMBER, 1939–DECEMBER, 1940

	MILLIONS OF DOLLARS		
	Receipts	Expenditures	Net receipts (+) or expenditures (−)
Trade and Service Items			
Merchandise	1,165	3,270	−2,105
Services	275	255	+20
Gold	2,711	—	+2,711
Capital	900	1,455	−555
Residual (errors and omissions)	—	71	−71
Total	5,051	5,051	0

II

The most apparent disadvantage of such an orthodox balance-of-payments classification is that it gives no indication of the nature of the strains and stresses involved in the adjustment of international balances nor, indeed, of the very existence of balances to be settled. There is no correspondence between such a compilation and the concepts of "equilibrium" and "disequilibrium" so frequently applied to international financial relationships.

To be sure, according to what is at present perhaps the dominant point of view, the possibility of a disequilibrium—i.e., the emergence of an active or passive balance or residual—in the global balance of payments can be flatly denied. In the technical accounting sense the balance of payments must always be "in balance," like the trial balance of a firm, to which the balance of payments as we know it has been compared.[3] This, however, is so obvi-

[3] Cleona Lewis, *The International Accounts*, p. 59.

ous that it is meaningless, and it is mere terminological quibbling to insist upon thus limiting the idea of equilibrium. In spite of this arithmetic truism, many economists and practical cambists continue to refer to a "favorable" or "unfavorable" balance of payments, recognizing the practical utility of these concepts in description of a given state of affairs in the exchange market.

Perhaps the simplest definition of foreign exchange equilibrium is that which is formulated in terms of supply and demand in the market. In so far as the exchange rate is free, its fluctuations can be viewed as an evidence of disequilibrium. Since, however, the rate is usually subject to the limits imposed by the gold shipping points or by official and semiofficial pegging operations, an additional criterion must be found, namely, in the existence of some kind of active or passive balance in the balance of payments. The balance-of-payments tabulation is in large part an attempt, imperfect to be sure, to reproduce statistically the determining forces operative in the exchange market over a given period of time. To present the full picture, of course, it would be necessary to include the complete psychological schedules of potential supply of and demand for foreign means of payment. This would explain not only why certain transactions become effective, but also automatically take the price or exchange-rate element into account. Since such a schema is statistically impossible, the next best thing is to measure separately the movement of the exchange rate and the actual, or ex post facto, equation of international payments, including not only those effected by the purchase of exchange in the market but also those involving the expenditure of foreign means of payment already held.[4]

III

If we are to employ the terms "active" and "passive balance of payments," we must select from the global statistical balance of payments a group of items the sums of whose debits and credits will show a residual balance which must be covered or "equilibrated" by the remaining items. One time-honored basis for classifying balance-of-payments categories is the distinction between "visible" and "invisible" exports and imports. The ques-

[4] Cf. Gottfried von Haberler, *Theory of International Trade*, pp. 18–19.

tion of visibility has, of course, no economic significance, referring only to the physical difference between goods and intangible services or "considerations." Many writers, moreover, have pointed out the confusion which arises when an export of capital becomes, for balance-of-payment purposes, an "invisible import."

Perhaps the distinction which is most hallowed by usage is that drawn between "current" or "income" items, which include payments for goods and so-called services, and "capital" items, which include all credit transactions.[5] Throughout the last century and a half a number of English writers—e.g., Horner, Huskisson, Giffen—used the term "balance of trade" in the above current-account sense.[6] The United Kingdom balance-of-payments estimates, as compiled by the Board of Trade, also used to follow this type of classification. The net difference between the credit and debit items was presented as the "balance available for investment overseas." Such a setup involved counting specie exports and imports among the current items. Since it is evident, however, that gold movements usually fulfill a special function in international finance, they are now grouped outside the current account in a separate account in most classifications, including those of the Board of Trade (since 1932) and the Bureau of Foreign and Domestic Commerce, although not in that of the League of Nations. Practice is by no means uniform, and the inconsistency which exists in this regard is another indication of the inadequacy of the distinction between current and capital accounts.

"Capital items must be rigorously separated from current items," writes Hall, "because no single datum in a balance of payments is more important than the net international movement of capital. It measures the change in the nation's net creditor or debtor position."[7] Cleona Lewis expressed the same viewpoint, that the

[5] "The distinctive mark is that in the case of current transactions there is an immediate *quid pro quo*, whereas the capital transactions, for the time being at least, are unilateral." Carl Iversen, *Aspects of the Theory of International Capital Movements*, p. 35. Thus, according to Iversen's definitions, emigrants' and charitable remittances and reparations would be included as capital transactions, having no immediate quid pro quo. This, however, would be contrary to the practice of virtually all contemporary compilers of balances of payments, who place most such items in the current account since they involve no granting or repayment of credit.

[6] Frank W. Fetter, "The Term 'Favorable Balance of Trade,'" *Quarterly Journal of Economics*, Aug., 1935.

[7] Ray Ovid Hall, *International Transactions of the United States*, p. 27.

current account balance "would show the extent to which current operations had provided funds for new investments abroad; or the extent to which they had necessitated the sacrifice of existing foreign investments or the contraction of new obligations to foreigners. It would thus show the net change that had been effected in the international debt or investment position of the country during the given period and would correspond, in its net amount, with the net change shown in a comparison of international balance sheets for the beginning and end of the period."[8] This takes no account, however, of changes in market value of long-term investments. As Dickens makes clear, "a balance on trade and service (income) account is an indication of the current movement of capital, but not of the accumulated capital position."[9] It may be claimed that the net movement of capital is important in that it gives rise to later capital movements and interest and dividend remittances in the opposite direction which will determine in part the nature of future balances of payments. But in view of market value fluctuation, transfer moratoria, scaling-down and outright default of indebtedness, and other factors influencing the liquidity of foreign investments, together with the fact that different rates of return on various types of long and short-term investments may cause the net flow of capital income to have no correspondence to the net debtor-creditor position, it seems questionable that the grouping of all credit transactions under one heading has any utility whatsoever. This is still more true when tribute and other completely unilateral quasi-capital transactions are included.

Some of those who draw a fundamental distinction between current and capital items defend their use of the country's net accumulation of foreign assets (or net reduction of indebtedness to foreigners) as a criterion of a "favorable balance of payments" on the basis that the net acquisition of claims on foreigners is a gain in "substance" for the country in question.[10] This would be

[8] Lewis, *op. cit.*, p. 64.

[9] Paul D. Dickens, "Criteria for Determining the Creditor-Debtor Position of a Country," *Journal of Political Economy*, Dec., 1939, p. 849.

[10] P. Reboud, *Précis d'économie politique*, Paris, 1934, II, p. 219, quoted by Eric Barbey, *Les principaux aspects du problème de la balance des comptes dans l'économie générale*, Lausanne, 1936, pp. 219–220.

justified if official or semi-official holdings alone of such foreign assets were considered, but certainly not in the case of the country as a whole. It seems a little fantastic to refer to Germany's large net export of goods and services in 1930 and 1931 accompanying the large-scale outflow of flight capital as an example of a "favorable" balance of payments in any conceivable sense. Moreover, is not a net export of commodities as much a loss of the national "substance" as a net reduction in foreign assets?

Undoubtedly, the source of many of the inconsistencies that have been associated with the rigid differentiation of current (or income) and capital accounts is the quite general tendency to reason from an analogy between the balance of payments and the financial statements of a private firm. Miss Lewis is perhaps one of those most addicted to this practice,[11] although she recognizes that "the international income account of a nation does not show 'profits' from the year's operations."[12] It should be stressed that a comparison between international balances and private accounting should be limited to two observations only, namely, that total debits are equal to total credits in both cases and that the balance of payments and the profit and loss statement both record the effect of transactions over a period of time, while the balance of international indebtedness, like a corporation's balance sheet, shows a situation as of a given moment.[13] Further analogies should not be drawn.

Finally, some consideration must be given to the argument that the current-account balance is of special significance as an indication of the influence of a country's international transactions upon its national income. The writer feels, however, that here again the distinction is of no value, as many of the capital items have the same proximate effect on national income that the so-called current items have.

IV

Opposed to the formal distinction between current and capital accounts as criticized above is the classification which differentiates

[11] Lewis, *op. cit.*, pp. 59, 64–65.
[12] *Ibid.*, p. 108.
[13] Cf. Barbey, *op. cit.*, pp. 202–212.

items according to the functional role which they play in shaping the course of the exchanges. Thus, certain transactions can be considered more or less *basic*, while the remainder fulfill largely a secondary or *equalizing* function. The latter are called into existence—along with the fluctuation of the exchange rate—only to help bridge the gap between the more fundamental factors of supply and demand. This gap represents the favorable or unfavorable balance of trade (in the widest sense) or the "disequilibrium" of the balance of payments as a whole.[14]

It is plain that at least some capital movements, particularly redemptions falling due, must be included among the basic items which make up the primary supply of and demand for exchange. Aftalion, for example, groups together "the *ensemble* of claims and debts arising out of exchanges of goods and services during the year under consideration, along with those resulting from operations which were effected previously, but which would normally give rise to settlement of interest or capital during that year."[15] All *new* movements of long and short-term capital, however, together with specie flows, appear to be considered by Aftalion as secondary, residual transactions. Williams,[16] on the other hand, in analyzing the Argentine balance of payments, included long-term borrowing and amortization among the more fundamental operations, and this practice was followed in 1924 by the League of Nations experts, who used the expressions "negative balance" and "positive balance" to indicate the net change in a country's short-term position.[17] The inclusion of normal long-term investments among the basic transactions is justified by the fact that such operations are more or less independently motivated by considerations of investment return and place exactly the same requirements upon the exchange market as, for example, a demand for exchange

[14] Here we are not concerned with the "transfer problem," which deals with the manner in which the basic items of the balance of payments are readjusted in the long run, through price level changes and otherwise, but rather with the criteria for determining that a short-run disequilibrium exists which may ultimately make a basic readjustment necessary.

[15] Albert Aftalion, *Monnaie, prix et change*, Paris, 1927, p. 257.

[16] John H. Williams, *Argentine International Trade under Inconvertible Paper Money, 1880–1900*, p. 47.

[17] League of Nations, *Memorandum on Balance of Payments and Foreign Trade Balances, 1910–1923*, Geneva, 1924, I, p. 37.

to pay for a cotton shipment. Although called into existence by somewhat different motives and circumstances, speculative long or short-term capital movements associated with the flight of capital also have an active and, when they are flowing in one direction, a disequilibrating effect in the market. They too should therefore be counted as basic transactions. The same holds true for movements of short-term "swap" funds. In so far as they flow in response to absolute international interest-rate differentials they are comparable to normal long-term capital movements; in so far as they derive from premiums and discounts on forward exchange either they are really advance payments for goods and services (normal hedging) or they constitute an indirect form of a speculative, flight movement of capital.

What, then, should be classified as secondary or equalizing balance-of-payment items? First, the exchange reserves of commercial banks and other exchange dealers themselves (both domestic and foreign), for it is inherent in the mechanism of the exchange market that day-to-day disequilibria are met by additions to or withdrawals from the working balances of foreign exchange held by these dealers with their correspondents abroad. Although, under free-market conditions, the exchange dealers usually allow such fluctuations in their positions to take place for the sake of speculative profits on the exchange rate, this type of "equalizing" speculation cannot be compared with the capital-flight type of speculation referred to in the paragraph above among the basic balance-of-payments transactions. Its function is purely that of ironing out short-run disequilibria. When the pressure of a unilateral balance of settlements is too persistent to be readily absorbed by the exchange reserves of the commercial banks without causing a considerable change of exchange rates and when the country concerned is on a de jure or de facto international monetary standard, the burden of exchange support is thrown upon the country's central monetary reserves, consisting usually of gold and/or official foreign balances. Whether this occurs through the traditional operation of the gold-points, through the voluntary and active intervention of the monetary authorities in the exchange market or gold market, or through any other mechanism is irrelevant. The important thing is that any *net* movement of a country's specie

or foreign-currency reserves constitutes the balance of ***equalizing*** items in the global balance of payments and bears a reciprocal relationship to the active or passive or "favorable" or "unfavorable" balance of ***basic*** items. The existence of such a balance, interpreted, to be sure, in conjunction with any significant movement of exchange rates, can be taken as evidence of short-run disequilibrium in a country's international transactions over any given period.

Although the classification as to basic and equalizing transactions outlined above bears no relationship to the conventional distinction between balances on current and capital account, it seems to reflect more accurately than the latter the practical short-run problem of the exchanges as it is faced every day by commercial and central bankers, businessmen, and government officials. In addition, there appears to be good historical basis for this usage. According to Fetter, "Whatever the Mercantilists said or implied regarding the components of the 'balance of trade,' one thing seems certain: the test as to whether the 'balance of trade' was 'lucrative,' 'advantageous,' 'in our favour,' or 'wrong,' 'against us' or 'to our disadvantage,' was the state of the foreign exchanges and the direction of the specie flow."[18] The predominant body of opinion in the classical tradition seems also to have followed this practice, with its emphasis on gold movements and exchange-rate fluctuations, from Thornton and the Bullion Report down to Mill, Senior, and Goschen.[19] Paish reported in 1910 that the term "trade balance" was generally used in monetary circles "to denote the ability of a country to import supplies of the precious metals."[20] These writers were preoccupied mainly with gold movements because they were naturally thinking in terms of the gold standard. The flow of gold, however, is of fundamental significance only in so far as it implies a change in a banking system's reserve of international money; and if this reserve includes holdings of foreign banking balances, bills, or even liquid long-term securities, the net movement of these items plays much the same role as that of gold.

[18] Fetter, *op. cit.*, p. 626.

[19] *Ibid.*, pp. 630–636; John Stuart Mill, *Principles of Political Economy*, III, ch. xx, xxi.

[20] Sir George Paish, "The Trade Balance of the United States," Senate Document 579, XXXII, 61st Congress, 2d Session, p. 153.

Finally, it should be pointed out that the definition of short-run balance-of-payments equilibrium in terms of net international movements of gold and *devisen* banking reserves brings this concept into some relationship with that of internal monetary equilibrium ("neutral money") for it is in large part through such movements of reserves that a country's international dealings affect its national economy as a whole. This, of course, is not as true today as it was before the advent of "sterilization."

V

Several practical problems arise in the compilation of the balance of payments according to the principles sketched out above. It would be extremely difficult in many countries, for example, to obtain statistics with regard to movements of intercommercial-bank holdings of exchange reserves, and even if it were feasible (as in the United States under the Treasury's weekly reporting system), it would usually be utterly impossible to distinguish equalizing movements from those arising out of interest-rate and forward-exchange-rate arbitrage and outright capital flight. Commercial banks in most countries, however, usually do not perform the equalizing function to any appreciable extent, but rather pass it on to the central bank or exchange control authorities. It is therefore permissible in most cases to count only the fluctuation of *official* reserves as equalizing transactions. In the case of countries like Australia and New Zealand, on the other hand, where the private trading banks sometimes hold substantial outside reserves for their own account, statistics on these funds are regularly available.

Despite the war, most countries still publish more or less complete figures on their own official gold and exchange reserves, except, of course, to the extent to which these are held in hidden funds. Moreover, in the case of the United States, figures are also published in the *Federal Reserve Bulletin* on the net week-to-week movement of foreign central bank funds (including funds in accounts transferred from central bank to government names) in the New York money market. It might be pointed out, however, that not all countries' official funds are administered through central bank accounts, since sometimes a designated commercial

bank, currency commission, or "institute" may be the official agency. Countries operating with clearing agreements usually publish the balances outstanding in their respective clearing accounts, and these are now extremely important types of official funds, although their behavior may differ from that of "free" balances. Where such countries are concerned, separate balances of payments should be drawn up according to the major currency areas ("hard currency" area, sterling area, reichsmark clearing bloc) that are dealt with.

A difficult problem of classification arises in the case of requisitioning and forced liquidation of privately-owned foreign securities and balances. In the Treasury tabulation of the British wartime balance of payments (see Table I, above) such transactions were included among the equalizing items ("Total drain on gold and dollar resources . . ."). On the other hand, there is a good argument for considering them among the basic items, if only because they constitute part of the final readjustment of the long-run balance of payments. If, however, American securities formed a *customary* part of the Exchange Equalization Account's exchange reserves, the fluctuation of such official holdings would naturally be counted as a short-run equalizing movement.

Gold movements should be considered as equalizing transactions only when they affect monetary reserves. For a country like South Africa, of course, the export of newly-mined gold is merely a commodity movement and should therefore be counted among the basic items, the equalizing function being fulfilled by fluctuations of sterling reserves. Indian absorption and release of specie in connection with movements of hoarding and dishoarding should also be considered among the basic transactions for similar reasons. Even changes in monetary gold reserves are sometimes to be classed as basic when they represent voluntary and more or less permanent changes in reserve policy. In 1913, for example, France bought some $36 million of gold in the United States market even though the exchanges were considerably below the gold-export point.

VI

To summarize: In many statistical and theoretical analyses of the balance of payments the use of the conventional terminology

and classifications—especially the distinction between the so-called "current" and "capital" accounts—tends to detract from the clarity and realism of the picture presented of international transactions. The writer believes it preferable to interpret such interregional or inter-monetary-area payments according to whether they represent a more or less original element of supply of or demand for *devisen* (*basic* transactions) or whether, like fluctuations in holdings of gold or other monetary reserves of international means of payment (*equalizing* transactions), they play a relatively passive role in the exchange market. This latter point of view is that consciously or unconsciously shared by those in practical contact with present-day international finance. The association of a "favorable" balance of payments with movements of gold and similar central reserves may be criticized by some as unduly mercantilistic. Realists must recognize, however, that in the world about us international commercial and financial intercourse is organized on a predominantly mercantilistic basis. Our statistics are inadequate if they do not take account of this situation, however unfortunate it may be.

REACTIONS OF THE FEDERAL GOVERNMENT TO THE 1837–1843 DEPRESSION

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I

The crisis of 1837 was the first serious business collapse faced by our federal government that did not seem to be a phase of adjustment necessitated by military conflict. From a new high level of prosperity the country was suddenly plunged into the depths of economic prostration. Prices declined, bankruptcies became commonplace, banks suspended specie payment, and urban unemployment grew into a serious problem.[1]

It was natural, as in the recent depression, that the people should place some of the responsibility for their misfortunes upon the administration in power and that they should look to Washington for the alleviation of their difficulties. Despite the widespread acceptance of the general principles of laissez faire at that time, the Van Buren administration reacted to this pressure as any political group anxious for public approval must react. Thus in 1837 the Democrats felt compelled to attempt an explanation of the causes for the collapse and then to suggest remedies for the conditions at fault.

Nor were the Whigs less willing to inquire into the reasons for the depression and to prescribe remedies. They naturally hoped to ride into power upon the wave of discontent. But while their policies before Harrison's inauguration in 1841 were purposely vague, the program as it developed was not a complete embodiment of laissez faire theory.

Business men, as usual, were quick to place the blame for the economic situation upon someone else. Among the many complaints and requests for assistance that poured in upon the ad-

[1] *Reports of the Secretary of the Treasury*, IV, 39.

ministration was one from a group of New York merchants that contained this sentence:

> We speak in behalf of a community which trembles upon the brink of ruin, which deems itself an adequate judge of all questions connected with the trade and currency of the country, and believes that the policy adopted by the recent administration, and sustained by the present, is founded in error, and threatens the destruction of every department of industry.[2]

In response to these appeals the Secretary of the Treasury quickly issued instructions that extensions of time up to 90 days be granted in the collection of duty bonds and assured the business community that "every species of relief and indulgence in the power of the Treasury, consistent with the laws and the public duties intrusted to its charge" would be extended.[3]

In addition at a special session of Congress called to deal with the nation's difficulties, President Van Buren presented an elaborate message which reviewed the causes of the crisis and advocated a number of measures for relieving the situation. In general the crisis was attributed to "overaction in all departments of business" that had been "stimulated to its destructive consequences by excessive issues of bank paper."[4] The large investments in unproductive lands, the expenditure of large amounts in internal improvements which were ruinously improvident in many cases, and the rapid growth of luxurious habits were also listed as important contributing causes. The recommendations of Van Buren for dealing with the depression included the establishment of an Independent Treasury, further extensions of time for payment of import duty bonds and government deposits in the banks, the withholding of the fourth deposit of the surplus from the states, and continuation of the effort to increase the circulation of specie in the country.[5] After making these recommendations the President closed his message by paying lip service to the principle of laissez faire and expressing confidence in the rapid recovery of the nation.

As the depression continued and deepened these declarations in

[2] *Ibid.*, p. 38.
[3] *Ibid.*, pp. 33–36.
[4] *Messages and Papers of the Presidents*, compiled by James D. Richardson, IV, 1542.
[5] *Ibid.*, pp. 1545–1560.

favor of governmental nonintervention became less and less frequent and definite. Governmental inaction, as in 1932, proved politically unfeasible. Significant, also, is the fact that after the brief recovery in 1838 Van Buren attempted to show that restored prosperity was due to the credit policies pursued by his administration.[6]

II

Both the Whigs and the Democrats agreed that one of the important causes of the depression was the rapid expansion of credit by the state banks following Jackson's removal of the deposits in the Second Bank of the United States. They also agreed that if future crises were to be avoided such an expansion must not be allowed to occur again. But here their agreement ended. The solutions proposed differed radically.

The Van Buren administration insisted that there was an inherent tendency in the banking system to expand upon governmental deposits that could be remedied only by discontinuing the practice of using banks as depositories. While it is true that the Democrats believed that government funds would be safer in the hands of public officials, this did not mean that they were willing to abandon control of the banks and the currency. Advocates of the Independent Treasury considered their program to be a reform that would result in an indirect, but much more effective, regulation of the banks.

In the first place the Democrats insisted that, if the federal government accepted and paid out only specie in all its monetary transactions, a demand for the precious metals would be created that would attract a larger supply from abroad. In addition there would be a constant demand upon the banks for specie to make these payments, and the banks would be more cautious in maintaining their reserves and less likely to engage in reckless expansion.[7]

Secondly, and more significantly, the administration believed that the Independent Treasury would constitute an automatic check upon the development of booms based upon undesirable bank

[6] *Ibid.*, pp. 1707–1708.

[7] *Gales and Seaton's Register of Debates in Congress*, 25 Cong., 1 Sess., XIV, 117–118.

expansions. Relying upon the experience from 1835 to 1837 they insisted that any such boom would necessarily increase public revenues and result in a surplus. If this surplus were only held in the form of specie in government vaults instead of being deposited in the banks, the specie reserve of those institutions would be quickly reduced and their expansion would come to a halt.[8]

The Whigs bitterly opposed the creation of an Independent Treasury from the first. They considered it an untried experiment to which the administration had been forced because of the breakdown of the state bank depository system. Clay and his followers attacked the Democrats unmercifully for leading the nation from the successful currency regulation under the Second Bank of the United States. They asserted that the administration had decided to abandon its constitutional task of regulating the currency and to adopt one currency, specie, for the uses of the government, leaving the people with a depreciated currency, bank notes.[9]

Van Buren's proposal was attacked as an attempt to destroy the banks and to create a completely metallic currency. The Whigs argued that such a currency would prove inadequate for the needs of the country, especially when a large amount would be withdrawn from use in treasury vaults.[10] Deflation with all its attendant evils, they insisted, would result. Clay and the majority of his party favored the creation of another national bank, but they did not openly advocate this until after their successful presidential campaign in 1840.

Because of the opposition control in the House, Van Buren was unable to secure passage of the Independent Treasury Bill by the Twenty-fifth Congress. But the brief revival in 1838 coincided with the Congressional elections of that year, and the Democrats secured a small majority in the House. Early in 1840 in the first session of the new Congress the plan was enacted into law. By this time economic conditions had plunged to a new low, and the Whigs in the same year secured control of both houses of Congress and elected Harrison as president.

But in order to unite the opposition to Van Buren the Whigs

[8] *Congressional Globe*, 26 Cong., 1 Sess., VIII, 453.

[9] *Gales and Seaton's Register of Debates in Congress*, 25 Cong., 1 Sess., XIV, 84.

[10] *Ibid.*, 170.

had purposely been very vague about their policies, and many of the party, including Vice-President Tyler, were opposed to Clay's schemes for creating a new national bank. When Tyler assumed the duties of president upon Harrison's death a split in the Whig party became inevitable. Clay quickly assumed leadership in Congress and formulated a bank bill to his liking. But in his effort to secure the presidential nomination in 1844 Clay refused to compromise with Tyler,[11] and the national bank bills were vetoed. It proved impossible for the Whigs to get together on any other proposal to regulate the currency, although they had already repealed the Independent Treasury Act and treasury affairs were in a chaotic condition.

The significant feature of this struggle between the advocates of the Independent Treasury and the adherents of the national bank proposal was that both parties favored controls by the national government which, it was hoped, would prevent a recurrence of the collapse. Neither party advocated a policy of allowing private interests to control completely the expansion and contraction of bank credit. This suspicion of the soundness of the banking system was illustrated by the strict regulations imposed by Congress upon the local banks of the District of Columbia in regard to the denomination of bank bills that they might issue, the maintenance of specie payments, and the granting of loans to bank officials or owners of the bank's stock.[12]

The debates of the period indicate a considerable degree of insight into the workings of a commercial banking system. While many of the refinements of the purely monetary theory of business cycles were lacking, Hawtrey would have found much to approve in their analysis of the causes of and remedies for the depression. These remedies, however, were primarily aimed at preventing future depressions rather than alleviating the effects of the current one.

III

It is frequently assumed that widespread demand for monetary inflation has been a universal feature in all of the serious depressions

[11] G. R. Poage, *Henry Clay and the Whig Party*, pp. 41–61.

[12] *United States Statutes at Large*, V, 449–451.

in the United States. This assumption is found definitely not to be correct for the 1837–1843 depression when the debates of Congress and the papers of the Presidents are examined. The belief that overexpansion of the banks and the accompanying inflation had been responsible for the collapse in 1837 was widely expressed and generally accepted. With such an analysis of the causes of the crisis it was natural that there should be little call for another dose of the poison.

Indicative of this opposition to monetary inflation were numerous laws passed by Congress during this period. In an effort to reduce the circulation of paper money and increase that of specie an act was passed in 1838 making it unlawful for anyone to issue or pass in the District of Columbia any form of paper money or draft of a denomination below five dollars.[13] Late in 1838 the Secretary of the Treasury issued instructions to all collectors that even though a bank had resumed specie payments its notes were not to be received if it issued notes of under five dollars.[14] When the Independent Treasury law was passed it contained a clause ordering the Secretary of the Treasury to issue regulations forcing all holders of drafts to present them promptly in order to prevent their use as currency.[15]

Large issues of treasury notes were made throughout the depression, but the needs of the treasury were the dominant consideration and definite efforts were made to prevent general circulation of the notes as currency. The first treasury note bill provided that the notes should bear interest up to 6 per cent and that the denominations should not be less than 50 dollars.[16] Of the first issue of notes more than two-thirds bore interest at 5 or 6 per cent.[17] There was some recognition that the treasury notes might take the place of part of the gold and silver that had disappeared from circulation and thus limit the continued fall of prices,[18] but there was no anticipation that rising prices might result. When the Whigs came to power in 1841 they even attempted to finance the deficit by

[13] *Ibid.*, p. 309.
[14] *Reports of the Secretary of the Treasury*, IV, 217.
[15] *United States Statutes at Large*, V, 391.
[16] *Ibid.*, p. 201.
[17] *Reports of the Secretary of the Treasury*, IV, 179.
[18] *Gales and Seaton's Register of Debates in Congress*, 25 Cong., 1 Sess., XIV, 1346.

the issue of bonds and to dispense with the use of treasury notes. When the bonds failed to meet with ready sale, however, they were forced to fall back upon the continued use of the notes.

The avoidance of inflationary measures by the federal government during this depression and the almost complete absence of their advocacy by any important group in Congress marks a significant difference from the activities in Washington during the post Civil War economic reversals up to, and including, the one commencing in 1929. It provides an excellent illustration of the fact that the politicians can only make use of current economic analysis in attempting to apply remedies to the problems they face.

IV

The financial policy followed by the government was definitely one of economy. Late in 1839 President Van Buren was very proud to point out that total expenditures for that year would be only $26,000,000 as compared with $33,000,000 for 1837.[19] Construction on some public works projects was continued on a reduced scale, but none of the debates on the appropriation bills indicate that relief for the unemployed was a significant factor. The only outright suggestion of public works for this purpose was the petition from citizens of Philadelphia that the government should order completion of the frigate "Raritan" in order to give employment to some of the idle men in that city.[20] This proposal was never reported out of committee.

Comparison with New Deal policies is so obvious that it requires little comment. Inability of the government to borrow upon favorable terms and lack of the "pump-priming" analysis probably combined to prevent popularity for this remedy.

V

Neither is there any indication that the policy of public land sales was affected by the existence of unemployment. Previous temporary pre-emption laws were continued in permanent form by a law passed in 1841, but the debates on this bill and the earlier temporary measures contain almost no indication of a belief in

[19] *Messages and Papers of the Presidents*, IV, 1753.
[20] *Congressional Globe*, 25 Cong., 2 Sess., VI, 70.

Congress that the problems of the urban unemployed might be solved by their moving to the West and taking up part of the public lands.

The somewhat too ready assumption is made today that earlier depressions created less serious urban unemployment problems because of the opportunity that those unfortunates had of resorting to free lands in the West. Certainly the politicians of that day did not recognize the public lands as an immediate answer to the problems of unemployment. It would appear likely that if any large-scale movement of the jobless from the East under depression conditions had been possible the advocates of pre-emption would not have failed to make use of that fact in their arguments.

VI

As was the case in every serious economic reversal in the nineteenth century, this depression precipitated a struggle over a national bankruptcy law. The only previous act had been passed in 1800 and repealed three years later. In the special session of 1837 the Democrats attempted to secure the passage of a bankruptcy law that would force the banks to resume payment on their notes.[21] As the depression deepened, the flood of business failures forced Congress to take cognizance of the problems created by the lack of uniformity in the state statutes and the difficulty of administering them. It was argued that one reason for the failure of the country to recover was the inactivity of a large group of progressive businessmen who had no incentive for renewed enterprise since any earnings would immediately be seized by their creditors. Pressure from the interested groups[22] finally caused the passage of a national bankruptcy act in 1841. The operation of this law was as unsatisfactory as the earlier one had been. Complaints of fraud and the escape of undeserving debtors under its provisions quickly arose, and the act was repealed early in 1843 by an overwhelming majority in both houses of Congress. The primary significance of this movement for a federal bankruptcy act is its demonstration of the fact that the tendency of sufferers from economic crises to look to the government for relief appeared well before 1932.

[21] *Gales and Seaton's Register of Debates in Congress*, 25 Cong., 1 Sess., XIV, 533-550.
[22] *Congressional Globe*, 27 Cong., 1 Sess., X, appendix. 498.

VII

Despite the widespread urban unemployment and the fiscal difficulties of the nation there was no significant move for revision of the tariff until late in the depression. The fact that the reductions under the Compromise Tariff of 1833 were not great until the two final changes in 1842[23] probably explains the willingness of the high tariff advocates to remain quiet until then. But even before the heavy reductions in 1842 had taken place, Clay and his followers had commenced the framing of a new protective tariff.

The Whigs had attempted to lay the groundwork for a permanent high tariff policy by combining with their pre-emption law a clause authorizing distribution of the proceeds of public land sales to the states. They had hoped that this would leave the finances of the government in such a position that a high tariff would be inescapable. The low tariff group had seen the implications of the move, however, and had insisted upon the inclusion of a proviso that the distribution clause should become inoperative at any time that tariff rates were raised above the 20 per cent provided for in the Compromise Tariff.

Three months before the final rate reduction was to take place the Committee on Manufactures reported a protectionist bill to the House. The Whigs in general were content to base their advocacy of higher rates upon the need for increased revenue, but at times they were quite willing to admit a belief in the efficacy of the tariff as a means of reviving business and relieving unemployment.[24] An attempt was made to preserve the distribution clause by repealing that portion of the Pre-emption Act, but Tyler's veto forced Congress to modify the bill so that distribution of the proceeds of public land sales to the states ceased.

VIII

One of the most interesting aspects of this depression was its result upon political fortunes. The brief recovery in 1838 saved the Democrats from defeat in the Congressional elections of that year, but when the new recession commenced in 1839 Van Buren

[23] Thirty per cent of the total reductions under the Compromise Act were to take effect on January 1, 1842, and another 30 per cent on July 1.

[24] *Hunts' Merchants Magazine*, VII, Oct., 1842, 347.

and his party were unable to escape censure, and the Whigs elected Harrison and Tyler and secured majorities in both houses of Congress in the 1840 elections. Unfortunately for them the depression continued to deepen and the Democrats regained control of the House in 1842 by a majority of almost two to one. Certainly this presents a good example of the close correlation between business activity and the fortunes of the political party in power. Had Van Buren been alive in 1932 he could scarcely have failed to sympathize with another President who was so unfortunate as to come into office just before the nation plunged into the depths of a serious depression.

IX

With this pressure from a dissatisfied electorate it is not surprising that the politicians of the day were willing to advocate changes that could be given the appearance of efforts to solve the economic problems of the nation. Any attempts to grapple with the problem had to be based upon the contemporary economic analyses of depressions. Perhaps the failure to attempt other solutions was due to a lack of adequate analyses rather than, as is commonly assumed, to a belief in the efficacy of a laissez faire policy. Undoubtedly numerous other factors, such as the lack of an extensive administrative organization and a comparatively conscientious adherence to the strict letter of the Constitution, prevented consideration of some measures.

The relation of the monetary system to the movements of the business cycle was better understood then than almost any other aspect of the problem. For this reason both parties in their attempt to prevent a recurrence of the crisis concentrated upon control of the banking system. The programs of both the Democrats and the Whigs were based upon the belief that they would limit the unwise expansion of the banks and so prevent a subsequent collapse of business activity. Due to the fact, however, that this depression had been preceded by a period of inflation resulting from an expanded paper currency there was virtually no agitation in Congress for an attempt at recovery by inflationary methods.

The records of Congress and the papers of the Presidents give ample evidence that laissez faire doctrine provided an important

element in the background of the thinking of the day. But it is significant that the statements of this policy were frequently accompanied by advocacy of modifications in the application of the principle. Wherever added governmental activities seemed to give promise of relief from economic depression men were found to urge the adoption of those policies. For this reason economic historians would do well to avoid the assumption that the theory of laissez faire constituted an impassable barrier to the advance of the nation toward solution of its social problems.

COMMUNICATIONS

SCIENTIFIC PROGRESS AS A CAUSE OF MALADJUSTMENT

Economists and sociologists have developed a standard pattern for a discussion on scientific progress as a cause of maladjustment. There is first a eulogy of science, which tames rivers, fights diseases, makes deserts bloom, bridges continents: briefly, our whole modern world is used as an evidence of what science has accomplished to establish Utopia on our planet.

All of a sudden Utopia disappears: masses of unemployed come into the picture and progress is pointed out as one of the major causes of economic and social maladjustment. Scientific progress appears then as a paradox. It seems that, while working for a better world we have sown the seeds of our own destruction.

In order to improve this situation many economic nostrums have been suggested. Some writers, like the authors of "Technology on the Farm" simply claim that there is "an urgent need to develop methods of directing technological change into socially desirable paths." A stupendous task is thus assigned to social sciences: to direct our efforts toward the elimination of harmful factors or the solution of hard problems, while carefully abstaining from any activity which might lead to unemployment or overproduction. Scientists, it is said, should use their knowledge, their instruments, their laboratories for the solution of the problems of mankind, not for the creation of new problems and greater unhappiness.

Unfortunately, this idea of science choosing her fields and her problems as a cameraman selects the subjects of his pictures, is no longer workable. There is no clear cut partition among the several fields of science. Neither is it possible to forecast the developments of any discovery. We have to consider any progress not as a step toward a definite aim, but as an event of unpredictable repercussions.

Thus, the first requirement for a well-directed progress, namely

the identification of "socially desirable paths" cannot be accomplished. A brief review of some scientific discoveries of the past will show the connections between allegedly independent sciences or fields as well as some unpredictable effects of supposedly beneficial discoveries. In 1828 Wöhler, studying the effects of heating on ammonium isocyanate, performed accidentally the synthesis of urea. This accidental discovery completely upset the idea that organic substances could be synthesized only by living beings and opened to chemists and biologists the immense field of organic synthesis. Such were the effects of this discovery that our century is sometimes called the "Century of Synthesis". However, while synthesis worked as a blessing for humanity as a whole, lethal was its action against the producers of camphor, of citric acid and of scores of other agricultural products which could not stand the competition of synthetic products.

Pasteur, a mineralogist, in his studies on the crystals of ammonium racemo-tartrate led to astonishing discoveries in the field of fermentation and, subsequently, to the discovery of the cause and treatment of infectious diseases.

Well can producers of wine and vinegar hail Pasteur as the savior of their industry, which he freed from many hazards and causes of failure. But, on the other hand, while solving the mysteries of fermentation Pasteur planted the seeds of destruction of the monopolistic position of certain countries in regard to wine. Today French, Spanish, Italian wines can be produced all over the world, wherever the special ferments can be grown and used. A whole economy, based on intensive farming and a high-priced produce is thus facing destruction.

Up to the first half of the nineteenth century the dyes that were employed for the production of fast colors all came from vegetable and animal sources such as indigo, cochineal, kermes, walnut husks, weld etc. In 1856 Perkin (working on an entirely different problem, namely the synthesis of quinine) discovered aniline dyes. This was the origin of all our coal-tar dyes which have so completely replaced the dyes of antiquity that the demand for the latter and the utilization of their sources are now practically negligible. The economy of several countries, formerly producing natural dyes, has then been completely upset. One realizes the plight in which the South could have found itself had not cotton

replaced indigo on the plantations toward the end of the eighteenth century.

It might be contended that the above cases are only instances of misdirected progress. In other words, even if the real significance of the discoveries could not be appraised from the very beginning, research should have stopped at the first hint of harmful consequences. But, in other cases, the need of progress, the plea for a solution of tremendous problems led to unpredictable, momentous results.

Fifty years after the discovery of aniline dyes, Perkin's discovery led to a revolution in medicine. Aniline dyes were used by Ehrlich against trypanosomes and spirochetae. Ehrlich's "magic bullet" against syphilis is only a modification of a red dye.

From Ehrlich's "side-chain theory of immunity" an entirely new branch of medicine, chemiotherapeutics, was born. Today the great producers of dyes like the Badische Anilin Soda Fabrik are at the same time the greatest producers of drugs. Any new, brilliant, color is nowadays tested against all pathogenic organisms.

A world free from syphilis, from meningitis, from pneumonia. . . . What else could we dream of? But, with tropical diseases held in check new frontiers would be opened in Asia, in Africa, in South American, and agriculture would become unprofitable in most of the Old World; new and tremendous problems would arise.

Scientists and breeders are striving toward a greater production of fats. More butterfat, more lard, more vegetable oils are the goals of research all over the world. However, outstanding biochemists agree in forecasting a great reduction in the demand for fats in the near future as a consequence of the discovery and synthesis of fat-soluble vitamins. Thus work undertaken to free humanity from "hidden hunger" might result in greater starvation, widespread misery, worse maladjustment.

The examples listed heretofore, as well as others which have been omitted for the sake of brevity, seem to indicate that control and direction of scientific progress should be considered wishful thinking.

Up to date, as a consequence of the cleavage and, eventually, of the conflict between technical and economic research, economists and social planners have given too little consideration to the pos-

sible evil effects of technological changes and scientific developments. Faced with the problems of unemployment and overproduction, faced with the plight of some producers, economists have pointed to science as a cause of the phenomena they were studying and describing. In some cases they have suggested legislative measures against labor-saving devices or proposed a system of compulsory employment. In other cases tariffs or discriminatory measures have been suggested as obstacles in the adoption of substitutes of domestic products.

All actions of the economists in this connection might be compared with clinic and curative medicine. It seems to the writer of this note that there is ample room for a more beneficial activity, which might be compared to preventive medicine. It seems to belong to the economist and social planner to counteract the enthusiasm with which new discoveries and developments are received. It is believed that faced with a new machinery or a new practice the economist ought to study all possible developments of its application and suggest those changes in the social organization that will enable society to deal with adverse effects of scientific and technological progress.

For instance, while aware of all advantages of artificial insemination the economist should account for the reduction in demand for all sires and for the disappearance of demand for the services of less valuable sires, which will accrue from the adoption of this practice. The reduction in the net income of the breeders, which may sometimes follow, might initiate social and economic problems to which the economist ought to give serious consideration.

Again, there is now a trend toward adoption of vitaminized substitutes for milk. This practice might imply a devastating blow to the dairy industry. Instead of suggesting discriminatory legislation, the economist should recommend measures aimed at an expansion of employment's possibilities in other fields for capital and labor previously used in butter production.

To formulate a general suggestion it might be said that, when an innovation in the productive process or shifts in demand might lead to unemployment, society ought to step in and demand economic activities in other fields where this technological unemployment could be absorbed.

We have emphatically stated that technological changes might lead to undesirable evil effects. The solution of the dilemma of progress is not, in our opinion, to prevent the adoption of a new practice or the application of a discovery which might reduce labor requirements and consumers' outlays but to plan for proper employment of the means of production which might be left idle.

The task of the economist and social planner is then more far-reaching than "to direct technological change into socially desirable paths". He must open new paths and recommend the broadening of others, thus planning a system of better social and economic institutions where risks of evil effects of technological change will be practically eliminated.

North Carolina State College, VICTOR BENEDICT SULLAM
University of North Carolina

THE REORGANIZATION OF REVENUE ADMINISTRATION IN COLORADO

The 1941 Legislature of Colorado enacted an "Administrative Code of 1941," the most sweeping provisions of which authorized comprehensive reorganization of revenue administration under one "director" to be named by the governor and approved by by two-thirds of the senate. For operating purposes the act became effective July 1.

The Department of Revenue took over administrative functions relating to all taxes authorized by the state except for certain activities incident to handling death, gift, corporation capital stock, and certain locally enforced measures. It also assumed partial responsibility for supervising local tax administration functions.[1] In addition the law charged the department with "collecting" numerous other revenues, including fees for practically all licenses, permits, and special services—of which the state has a large number.

Even before Mr. F. R. Carpenter[2] took active charge as Director

[1] However, equalization and utility assessment jobs are still to be within the purview of the civil service Tax Commission.

[2] Formerly Director of Grazing in the federal Department of the Interior. "Farry" Carpenter, as he is generally known, is a graduate of Princeton and of the Harvard Law School. Although without tax administration experience, he is peculiarly equipped for his job, both by nature and by extensive local and federal administrative experience.

of Revenue, he had arranged with experienced consultants[3] to aid in working out a plan of operations. The planning "team" went to work in Denver June 2 and 3 and were thus forced to plan and set up administrative machinery in less than one month.

Structurally, the plan designed differs from those operative in other states in a number of respects—most of them dictated by the statute or by other local conditions. Primary line responsibility for discharging the obligations of the department is lodged in two divisions, one of which is in charge of all audit and other technical tax work and the second in charge of all administrative routine—both for the Department of Revenue functions and for those of outside agencies. The former includes three units, a legal entity (as required by statute), a bureau of motor vehicles (in four sections), and a bureau of taxation (in which are three tax sections with an integrated audit program). The division of administrative services provides for sections handling mail, cash, accounts, collections, proving, files, and miscellaneous services.

In addition, there is a general staff service and a general fiscal and personnel agency. The former handles statistics, general research, and publicity under the direct oversight of the director. The latter is similarly in charge of the department's budget, the costing, the purchasing, the stenographic pool, the personnel and payroll work, and like functions. These two units, however, are essentially housekeeping and staff activities. The actual handling of tax work, as already indicated, is centered in the two divisions previously described.

One limiting factor under the Colorado constitutional civil service set-up is the possibility of securing personnel fitted for the peculiar requirements of a modern tax department. However, with the cooperation of the Civil Service Commission, though no special examinations have been offered (save for auditors and field collectors), competent men have been obtained for four key positions. One is George Peak, chief of administrative services, who has had considerable administrative experience in the tax departments of Kentucky and Louisiana as well as elsewhere. A second

[3] The writer was assisted in this work by Messrs. Dansie and Christensen of the Utah Tax Commission, Mr. Sowers of the University of Colorado, and Mr. Harold Singer, a recent graduate of the same institution. Some of these were inexperienced.

is Harold Hurst, chief of staff services, like Peak a graduate of the University of Denver, who till recently was in private finance study work in Ohio. The third is the fiscal agent, Mr. Dieter, long known as an able Denver business executive. The fourth is James Byrd, who for many years has been an accountant in one of the outstanding Denver firms of certified public accountants. The depûty director has not been named at the time this is being written. All these gentlemen are provisional civil service appointees. They must take competitive examinations within six months from July 1.[4] Each must stand first on the examination or be replaced.

Another problem confronted by the department—and not yet entirely solved—is that of handling the numerous collections of petty amounts for other state agencies. One provision of the statute prohibits collection of any money by persons who have to do with audit work. Another authorizes deputization of other departments under certain circumstances. The department has been forced for lack of time to deputize certain licensing agencies and in effect has authorized them to mix policing with collecting functions. There seems to be no great technical problem involved in working out of this anomalous position; but, unless it is done promptly, there may be considerable political difficulty.

Still a third administrative issue of significance is that of securing a larger audit staff and a reduced collector staff. There have been about 30 or 40 of the former and nearly a 150 of the latter. Adjustment will be made in this distribution effective in part August 1. It is contemplated that competent auditors will prove scarce.

Notwithstanding these and other unsolved, or only partially solved, problems the Colorado Department of Revenue promises to take its place among the successful state tax administrations. If this good omen is borne out by subsequent developments, the integrated and successful department will replace one of the most scattered tax administrations still remaining January 1, 1941, in any state.

University of Kentucky JAMES W. MARTIN

[4] Indeed, all appointive Colorado administrative employees save three legally "confidential employees of the Governor's office," of which the Director of Revenue is one, must be civil service appointees.

BOOK REVIEWS

Investment and Business Cycles. By James W. Angell. New York: McGraw-Hill Book Co., 1941. Pp. xviii, 363. $3.50.

This is a major contribution to business-cycle theory, well written and closely reasoned. It is impossible to do it justice in a brief review.

Taking the cycle as given, the author endeavors "to construct a general hypothesis which can account for the appearance and working of self-generating business cycles." He rules out "exogenous" developments as a major casual factor, and follows the Keynesian approach and methodology with several modifications, qualifications, and changes of emphasis as to conclusions.

In sharp contrast with Keynes, the author holds that "the market rate of interest" has comparatively little influence on the rate of new investment. A large part of this disagreement is due to a failure to agree on the concept. Angell uses "the market rate of interest" to mean the average current yield on existing investments and attributes that view to Keynes (p. 41). This reviewer finds no evidence to indicate that Keynes holds this concept; rather Keynes' concept would seem to be Angell's "marginal expected yield" on existing assets (p. 43).

The central theme of Angell's theory is that anticipations govern the rate of new investment, which, in turn, governs income. (He refers to the rate of investment as the "trigger mechanism" which controls general economic activity.) But anticipations are governed by the income of the immediate past. How can a change of direction occur within such a "closed chain"? The answer is that the relation running *from* anticipations *to* income is direct and linear while the relation running from income to anticipations is not linear but depends upon the *rate of change.* Anticipations are constant when income is changing at a constant rate. This is due to certain technological factors governing the amount of investment necessary to sustain income which is changing at a constant rate (p. 74). This last step is the weakest link

in the theory; the author's discussion of it is neither clear nor adequate. Taking his analysis as it stands, however, it would seem that the technological factors are the real "trigger mechanism" which actuates anticipations which, in turn, govern investment and income. Like Keynes, the author believes that the immediate and objective factor which limits expansion and precipitates depression is some form of hoarding or failure to spend.

After developing his theory, the author checks it against the cycles we have experienced and uses it to indicate solutions to some of our present problems. Especially good is his discussion of the circular velocity of income in the United States between 1899 and 1939. He does not believe that deficit spending after 1933 had any pump-priming effect but does believe that it raised income substantially and that it will be necessary for an indefinite period in the future. He does not subscribe to the "stagnation theory" because of the facts adduced by Hansen and others but thinks we may be faced with a partial stagnation because of an increased "marginal pessimism." When he thus carries his psychological theory over into the secular field, we might again ask whether technological factors influence or govern anticipations. The author is not greatly disturbed at the prospect of an indefinite increase in the public debt because of deficit spending but he regards increased taxes as a major deterrent to new investment. In the final chapter the author discusses the inflationary possibilities inherent in the financing of national defense and makes some interesting and impressive calculations and predictions regarding the onset of inflation.

Specific recommendations to encourage new investment include: abolition of the tax on capital gains; a sharp reduction in the normal income tax on corporations; a substantial tax on hoarded money; an increase in estate and inheritance taxes; and, to finance the present emergency, a sharp increase in the excess-profits tax and, if necessary, a retail sales tax.

In this book the author has maintained the high standard set in his previous works. It is a lucid, penetrating, and comprehensive treatment of the outstanding economic problem of the day.

In closing, this reviewer must pay a brief tribute to the preface.

It is the best exposition of "the" money problem which has come to his attention and might well be required reading for all students of economics, graduates and undergraduates alike.

Duke University B. U. Ratchford

Economic History of the United States. By Chester W. Wright. New York: McGraw-Hill Book Co., 1941. Pp. xxviii, 1120. $4.00.

Every student of economic history has experienced the futility and aridity of many of the older books that treated the subject as a mere chronicle of past events. Teaching emphasis upon memorization of dates and factual sequences completely concealed the significance of man's struggles to solve his real and pressing economic problems. Fortunately the trend of recent years has been for the historian to emphasize the relationship of economic factors to the general current of history and for the economist to regard the historical as an important part of his field of investigation. It is the functional approach that dominates the book under review. Professor Wright defines his work as "a study of the production and distribution of wealth with the objective of learning how the nation's economic progress can be promoted and advanced." Thus the past is considered in relation to the greatest economic problem that has ever pressed for solution. Such an approach breathes life into the bones of fact and waters the desert places in economic history.

Ten hundred and eighty-six pages are divided into 46 chapters grouped into four parts: I. The Colonial Period; II. The Period of Wars and Economic Transition, 1764–1815; III. Westward Expansion and the Rise of a National Economy, 1816–1860; IV. The End of the Westward Movement and the Growth of Capitalistic Industry. Although fully half the book deals with the period after the Civil War the author refrained from attempting to treat the twentieth century as a separate epoch; but this concession to historical perspective did not prevent the inclusion of thought-provoking chapters on the World War years and the recent depression.

While the individual chapters present adequate treatments of separate problems and periods, the author has succeeded in keeping before the reader his main purpose—the study of the standard

of living of the American people. The introduction emphasizes the importance of tracing the effects of the employment of land, labor, capital and business ability under a variety of circumstances from the primitive economy of colonial times to our present highly industrialized society. A preface to each part of the work stresses political as well as economic backgrounds and indicates the nature of the problems that were of importance in the period. Concluding chapters attempt to bring into contrast conditions in colonial, Civil War and present-day periods and to apply the lessons of the past to the solution of the problems of the future.

The history ends with a note of warning. "We face a future in which the unusual combination of circumstances so favorable to the rapid economic advance of the United States and its people in the past cannot be expected to continue unchanged." Few will deny that "it becomes most important to secure wise and efficient control of the economic order." It is in the means to be employed to attain that end that critics may be inclined to take issue with the author.

Reading the book one is inclined to agree with the author's statement that economic history "requires a far wider range of knowledge than any other branch of economic research." Professor Wright has succeeded in presenting a clear and realistic story of the economic development of the United States. Attention is inevitably drawn to the skillful use of charts and the excellent bibliography reducing to a minimum the use of footnotes. Well planned, comprehensive and accurate, Wright's *Economic History of the United States* will be welcomed by student and teachers as one of the most readable and teachable texts of recent years.

University of Virginia D. CLARK HYDE

A History of Economic Ideas. By Edmund Whitaker. New York: Longmans, Green & Co., 1940. Pp. xii, 766. $4.00.

Professor Whitaker's work is a fresh contribution to the growing list of histories of economic thought. In it the author places major emphasis upon concepts and not upon schools of thought or individuals, for he believes that "past ideas on wealth or value, related to the environment in which they were propounded and to the theories that are significant at the present, are of interest,

rather than the ideas of Adam Smith or the British Classical School *per se*."

This approach involves certain difficulties overcome not too satisfactorily in this first effort to write a full-length history of doctrines employing the ideological method. To mention a few, there is the problem of selecting topics to be developed in a volume of this length (there are only 16 chapters); of organizing the material included so as to maintain separate identity of each topic chosen (more than once this reviewer became entangled in the complicated cross-reference system employed); and of determining the order of presentation (which admittedly involves considerable personal preference).

The degree of success attained in this ambitious undertaking is no doubt high, though there will be disagreement with Professor Whitaker in his lack of separate treatment of such important subjects as public finance and taxation, the national income, and others, particularly in view of the approach employed. Also, there are grounds for objecting to the excessive weight given the very early history of every topic developed, and the consequent scanty discussions at other points, in a volume containing only 766 pages of relatively large type.

On the contrary there will be hearty approval of the author's extensive reference to institutional factors—psychological, philosophical, legal and theological—as they affect the running course of economic history. It is this quality which makes his treatise stand highest among the histories of economic doctrine, in the reviewer's opinion. Not less to be approved, however, is the great capacity of the author for an objective and deliberate appraisal of the concepts developed. Particularly inspiring is the utter lack of dogmatism displayed from beginning to end.

The treatise is well adapted to courses offered in institutions where library facilities are limited, inasmuch as extensive use is made (in a pleasing manner) of excerpts from original writings without unduly lengthening the book. Certain student aids are missing, however, while others are of limited value. Review questions are lacking, references appear at the end of the volume rather than at the conclusion of each chapter, and the index is too general and short for effective use. On the other hand, ex-

cellent summaries conclude each chapter and while well documented, the book is conspicuously lacking in cumbersome footnotes.

Professor Whitaker has done an outstanding job of judicious selection of quotations, and none will question the quality of his scholarly writing. It is no easy task to compress even the best of the economic philosophy of centuries into a usable volume, and the intent of the author was "not to mention every individual who has contributed something of importance, but to select by criteria of usefulness and accessibility a sufficient number of writings to illustrate the principal developments of thought."

Washington, D. C. T. F. Haygood

The Second Yearbook of Research and Statistical Methodology. Edited by Oscar Krisen Buros. Highland Park, N. J.: Gryphon Press, 1941. Pp. XX, 383. $5.00.

This yearbook carries on from where the first yearbook, *Research and Statistical Methodology Books and Reviews of 1933–1938*, left off. The volume is a collection of excerpts of critical portions of reviews appearing since the first yearbook was published. The reviews appearing in that volume are not reprinted, but there are a large number of additional reviews of books that were listed in the first volume. The plan of the book is similar to the previous one, but it is much more extensive. This volume includes 1652 excerpts of reviews of 359 books obtained from 281 journals. The amount of space devoted to each book is roughly proportional to the number of evaluative reviews that the editor was able to locate. As before, the arrangement of reviews is alphabetical according to author. Also included are indexes of authors' names and book titles, a classified index of books, indexes and directories of periodicals and of publishers, and a classified list of cooperating periodicals.

The chief concern of the editor appears to be that some textbook writers of statistics appear not to be abreast of current developments in their field. By providing teachers with a ready method of ascertaining which of the books are deficient in this respect, is it hoped not only that teachers will be aided, but that incompetent authors will be discouraged. But it is pointed out

that unfortunately many of the reviewers are as ill-informed as the textbook writers.

This volume should prove even more valuable than the preceding one in accomplishing the objects set forth by the editor. Some of these are: to help teachers to select texts, to improve the quality of books and of reviews, to help students and research workers keep up-to-date and to discover methodology in other fields which they can adopt, and to provoke thought by exposing the reader to critical and often conflicting statements.

University of North Carolina DUDLEY J. COWDEN

Public Policy: A Yearbook of the Graduate School of Public Administration, Harvard University. Edited by C. J. Friedrich and Edward S. Mason. Brattleboro, Vt.: Vermont Printing Co., 1941. Pp. viii, 458. $4.00.

The theme of the major portion of the second annual *Yearbook* of the Harvard Graduate School of Public Administration relates to budgetary and fiscal problems on the assumption that these problems are of paramount importance at the present time. Part II of the volume, which deals with defense problems and planning, seems to the reviewer much more pertinent to present-day issues, than do fiscal problems.

Taking Part II first, the essay on the New Antitrust Procedure is a good running account of this phase of public administration which is not ordinarily available to the average busy administrator. In the discussion of the Hatch Law, the changing role of the public servant is the theme. It is pointed out that monopoly today almost makes a representative of a private institution one of a group also. The Hatch Law is described as working some hardships upon public employees becoming private employees.

In the essay on Broadcasting in War Time an appreciation of the major problems of control is given which should be of great value to any student of Public Administration. Only the bare framework of Administrative Planning for National Defense is presented. It is very doubtful to the reviewer that War Department experience would be very applicable to non-military planning.

Of the chapters in Part I dealing with budgetary and fiscal

problems the one on Budgetary Symbolism clearly poses the dilemma as to whether the fiscal policies of the federal government are sound. It is alleged that under present conditions frustration is a more serious threat to democracy than any willful act of office holders. The Investment Budget—capital expenditures—for the government seems a foregone necessity as interest and depreciation are different items from those in the operating budget. The Formulation of the Federal Budget is as good a description as the reviewer has seen, aside from ignoring state budget relations. Deficit Finance is illogically recognized to be of a short-run character for somewhere between the long run becomes the short run. Governmental Expenditures over the decades of the 1930's are thought to have aided the lower income groups.

Without any doubt, well-informed public administrators will wish to keep acquainted with the ***Public Policy Yearbook.*** The theoretical nature of the first ***Yearbook*** is much improved, but with much resulting complexity from treating several unrelated topics.

Kentucky Legislative Council ORBA F. TRAYLOR

Public Utility Economics. By C. Woody Thompson and Wendell R. Smith. New York: McGraw-Hill Book Co., 1941. Pp. 727. $4.50.

The volume under review has much to recommend it in a field where new texts should be welcome. First and foremost, it brings the utility problem down to date. If it had no other virtues, the present reviewer would be grateful for the descriptive material presented in such chapters as those on National Regulation, Security Regulation, the Holding Company, and the Street Railway. Second, it makes a commendable effort to integrate the theory of utility rate-making into general price theory. Unfortunately this effort suffers by repeated reference to a "competitive norm" for the firm under decreasing costs with the apparent implication that a norm of price and output might exist under such cost conditions (pp. 97, 272). Third, the volume has the pedagogical merit of a very comprehensible functional organization under which the discussion is divided into four parts: Fundamentals; The Agencies of Regulation; Primary Problems of Regulation; and Special Problems of Regulation. Fourth, the

study is characterized by an institutional viewpoint which keeps before the reader the steadily evolving character of all utility problems.

The authors take the position that over the long run the best results in the utility field will be obtained by monopolistic private ownership and operation (though the area over which monopoly is to exist is not defined) subject to thorough-going state and federal regulation. Although they recognize many shortcomings of regulation in the past, they believe that this form of control may still be made effective if present tendencies to strengthen public service laws continue, if budgets of regulatory commissions are made commensurate with commission responsibilities, and if the judiciary will adopt a consistent principle of valuation. (The principle which the authors recommend is the cost of a substitute service because this ". . . best approximates the competitive principle of pricing, and it should give a maximum of flexibility in utility prices" [p. 378].)

We believe that the most serious weakness of the study is its failure to deal adequately with the problem of incentives to efficient and progressive operation under private monopoly. In recent years many have come to believe that public competition or the threat thereof may provide a much needed stimulus to superior performance by privately-owned utilities. The authors dismiss this suggestion with the simple statement that "competition is uneconomical. . ." (p. 376), but they suggest no substitute formula. For example, they find little merit in either the sliding scale or the Washington plan (pp. 173–176). It is also regrettable that there are numerous inaccuracies as to fact in the discussion of public power projects and the Tennessee Valley Authority.

The writing throughout is clear and the print good. Footnotes are plentiful and there is a bibliography at the close of each chapter. The index is satisfactory, and there is a complete table of cases.

Vanderbilt University JOSEPH S. RANSMEIER

An Introduction to the Social Sciences. By Robert E. Riegel and Others. New York: Appleton-Century Co., 1941. Two Volumes. Pp. xxv, 1109, xxvii. $6.00.

This text represents the end product of years of experience in teaching a social science survey course at Dartmouth. It is planned for the sophomore level and is preceded by an historical review of Western civilization since 1750. The objective was to unify the course by treating current social institutions in American society from the standpoint of the several social sciences. In this way it was hoped to avoid a mere survey of the separate disciplines. More than one-half of the 1109 page text covers subjects generally included in economics, slightly less than one-third is clearly sociology and the remaining one-sixth comes in the domain of political science.

Francis E. Merrill introduces the first volume with an excellent chapter on social institutions and leads on into the problem of social change. Robert E. Riegel then discusses the nature, structure and financing of the modern corporation. A brief but clear outline of the functioning of the price mechanism with especial emphasis on administered prices is the contribution of Earl R. Sikes. A thought-provoking section on Government Control in Business by Elmer E. Smead follows. The difficult subjects of money and banking are covered in less than 100 pages. Professor Sikes stresses controls of the general price level. His chapter on foreign exchange is an unusually clear account for the beginning student. J. M. McDaniel deals with public finance and discusses the nature and trends in governmental expenditures, the problems of taxation and the field of public borrowing. An all too brief section is devoted to the consumer. Emphasis is placed on sales pressure and on the quality of the products by Professor Stillwell. Professor McDaniel ends the first volume with a discussion of social security and trade unionism.

In his discussion of agriculture, at the beginning of the third volume, Lewis D. Stillwell does an excellent job of synthesizing the economic, sociological and political science approaches. In brief compass he has succeeded in presenting a provocative survey of the problems of farm life. Professor Riegel covers the fields of population and race. The quality and quantity of population in the United States, its composition, the facts and theories concerning race, and migration receive attention. Professor Merrill discusses the family as a social institution, its disorganization and reorganization. Emphasis is placed on the changes taking place

in the American family. The affectional rather than the parental functions of the family is stressed. Ralph P. Holden has succeeded in presenting an excellent picture of the fields of criminology and penology in the section on crime. And W. L. Eager is responsible for the discussion on government. He presents a brief analysis of our constitutional system, giving due stress to the administrative process and government by commission. The concluding section by Professor Smead is a realistic presentation of politics in a democracy. It is crowned by a fine chapter on civil liberties.

The Dartmouth group have presented an excellent text for the general survey course in the social sciences. The topics are well selected, ably presented, and will lend themselves to lively discussion. A carefully selected bibliography adds to its value as a text. The reviewer would have preferred more of an historical background to some of the discussions. An apparent typographical error exaggerates the number of foreign born in certain sections of the United States (p. 687).

University of Arkansas AUSTIN VAN DER SLICE

Deficit Spending and the National Income. By Henry Hilgard Villard. New York: Farrar & Rinehart. 1941. Pp. xviii, 449. $3.50.

For the reader who has been somewhat staggered, both by the volume and the complexity of the material written regarding the "Kahn-Keynes Theory," about *multiplier* and *leakages*, this book will be very illuminating, and to some extent a time-saver. Part II is especially valuable as we find here a chapter on The Work of R. F. Kahn; another on The Controversy between Kahn and Neisser; one on The Work of J. M. Clark; and Other Contributions to the Multiplier made by Keynes, Mitnitzky and Haberler.

The latter part of the book shows the amount of deficit spending in the United States during the decade of the 30's and the extent to which it was probably effective in increasing the national income. Table 22, p. 326, gives the Total Net Income-Increasing Expenditures Compared with Various Measures of Business Activity by quarters for the entire decade.

Mr. Villard is quite hospitable to the idea of deficit spending, both as a means of combating the depression phase of the business cycle, and as an antidote for *secular stagnation*, and by consequence,

he is not particularly alarmed by a secular increase in the national debt. In the last paragraph of his Summary and Conclusions he says "it may be that within our generation government deficits will cease to be looked upon as reprehensible things to be combated at all cost and will instead come to be depended upon as a means of regularizing economic activity" (p. 373).

The use of deficit spending by government to smooth out the business cycle is familiar and easily defended. The presumption is that debts incurred in depression will be liquidated in prosperity and hence will yield no secular increase in government debt.

When deficit spending, however, is presented as a remedy for *secular stagnation* there is great need for careful scrutiny. Deficit spending then becomes a continuous process entailing a secular rise in indebtedness. It is defended by the author on two grounds. First, he quotes with approval the views of Professor Alvin Hansen (p. 344) that the United States economy, if left to the automatic forces, will suffer chronic depression because: (1) we are approaching a matured economy; (2) we face a static if not a declining population; and (3) no new major industries are visible on the horizon, such as railroads or the automobile, to spark the economy. Hence, there results a shortage of private investment, which yields a shortage of employment and reduced national income. If, into this state of underinvestment, underemployment and reduced national income, deficit spending is sponsored by the government, then this spending will have "pump-priming" effects through a *multiplier* which expands production and employment, and adds to the national income far in excess of the deficit spending. And, so long as the national income is increased by an amount greater than the deficit, the result is a net improvement in economic well being.

The reviewer is not at all convinced that the economic order revealed symptoms of secular stagnation during the decade of the 30's for the reasons given. Perhaps a better explanation was given by F. C. Mills in *Prices in Recession and Recovery* (pp. 440–7) and by H. G. Moulton in *Income and Economic Progress* (p. 138) where both advanced the idea that chronic depression in recent years was probably linked with the growth of monopolistic competition, with the result that reduced costs through improved technology

were no longer shared as previously with consumers in reduced prices. Quite definitely, the business world, (and the political world) has championed "scarcity economics" in an attempt to improve operating statements by making goods scarce and prices high. Such an economy must of necessity experience chronic depression and underemployment.

Had competition been more effectively preserved, then improved technology would have led to more goods at lower prices; and when increased wealth and income are so shared, there is no lack of effective demand, and no imperative cause for fractional capacity or secular stagnation. More dynamic competition and less deficit spending may still be the wiser corrective for presumed secular stagnation.

Louisiana State University H. L. McCracken

Fiscal Policy and Business Cycles. By Alvin H. Hansen. New York: W. W. Norton & Co., 1941. Pp. ix, 462. $3.75.

The volume under review is likely to prove as thought-provoking a point of departure in economic thinking as Quesnay's celebrated *tableau*. It questions the tenability of a body of doctrine which has held sway for many decades, and challenges the fiscal rules of thumb whereby legislators and editors have been guided for as long as one can remember. It suggests that the Western world is entering upon a new stage in its development, and is facing the need of reorienting public economic policy. This study will compel those who question its conclusions to reformulate their own, and it will induce those who accept its major theses to inquire into their full implications lest the new wine prove as heady as the old proved sluggish.

Professor Hansen's work consists of five parts: (a) analysis of the economic circumstances which shaped the unprecedentedly fatal thirties; (b) an account of old and new fiscal policies, and of the economic effects of changes in tax structure and budgetary policy; (c) treatment of the relation of fiscal policy to the full use of resources; (d) description of investment incentives, past and present; (e) examination of the economics of defense, war, and aftermath. An excellent review of the interrelations of the multiplier and the accelerative-decelerative tendency, based upon Samuelson's important work, is included in (c).

Fundamental to Hansen's analysis is his view that the investment-savings situation has changed. In the past the opportunities for private investment were so great, and the capacity to save was so limited, that economists and publicists continually extolled the virtue and importance of saving. Whence it was urged that governments tax as lightly as possible, and restrict their borrowings to the necessary, lest the too small saving stream become even smaller; and it came to pass that governments were deemed good in proportion as they avoided direct participation in productive and economic processes, and that taxation and other fiscal policies were treated as distinct elements rather than as parts of an integral whole.

Today Western economies are afflicted, not by a deficit of "savings" but by a shortage of investment opportunities. The old sources of investment are drying up, and the new and potential sources are proving difficult to actualize. The economy is not exhibiting that natural and necessary expansionist tendency which, economists in the past reasoned, is supposed to animate unregulated private enterprise societies. For investment, the *primum mobile*, is no longer moving as it must, if something like full employment is to be maintained.

In consequence of the triumph of stagnation over expansion, governmental fiscal policies must be altered. The aim of fiscal policy can no longer be, as in the past, the raising of moneys painlessly for the defraying of limited expenses of government; it must also be the maintenance of employment at as high a level as is consistent with the avoidance of inflation. Tax structures, budgetary theory and practice, and attitudes toward debt must be unified and altered accordingly. Furthermore, in proportion as active investment policy fails to absorb savings, greater emphasis must be placed upon expenditures.

Professor Hansen's analysis raises many questions which remain to be answered in full, and which probably will be answered in consequence of his explicit positing of the fundamental problem. What are the psychological and economic effects of debt? Does emphasis upon investment carry with it understress upon the hard facts of factor immobility and the institutional causes of immobility? To what extent is the organization of the economy re-

sponsible for the lack of investment opportunities and for the lack of an economic *elan*? Can a government, structured and manned after the fashion of the present-day American government, fulfill the role it must play if, on Professor Hansen's premises, we are to enjoy something like full employment?

Duke University J. J. Spengler

The State Fiscal Capacity of Maryland and Other Selected States. By V. J. Wyckoff and William Paul Walker. College Park, Maryland: University of Maryland Agricultural Experiment Station, Bulletin No. 438, Novermber, 1940. Pp. 165–204.

Definitely academic in approach, this 40 page bulletin gives a helpful analysis of what the authors call "fiscal capacity." The first part of the report is a highly abbreviated examination of the state budget officials' success in estimating tax revenues for 1928, 1929, 1933, 1938, and 1939. The second part studies the relation between tax revenues and certain measures of economic well-being in Maryland as compared with selected other states. Among the other states are Connecticut, Massachusetts, Illinois, Ohio, Virginia, and West Virginia classified (p. 169) as "those of similar taxable resources" or "adjoining states." With states exhibiting such variations in industrial and constitutional characteristics, the student will not be surprized to find marked variations. On the basis of statistical analysis of a variety of data the authors find that Maryland "has adequate tax resources and is using them with average results" (p. 201). The concluding or third part of the booklet embodies an analysis of certain facts bearing largely on the productivity of certain specific tax measures, some of which are not exploited in Maryland. The reviewer is unable to see the direct bearing of the last section—interesting and helpful as it is—on the principal subject of the inquiry.

University of Kentucky James W. Martin

The Flow of Business Funds and Consumer Purchasing Power. By Ruth P. Mack. New York: Columbia University Press, 1941. Pp. xvii, 400. $3.75.

Dr. Mack believes that this study throws light upon the causes of business cycles and so does the reviewer. Excepting the last chapter, her study is confined to an examination of "the flow of

money to business and away from it over a period of time." She wanted to find out if there was or was not a tendency for the cash disbursements of business over a period of time to be sufficient to allow the purchase of commodities offered for sale at the prices listed. That the consumer's propensity to save is a pertinent variable in the problem is recognized but not considered at length.

The author used the sampling method, since the task of making an empirical study of all businesses was not feasible. The financial statements of 54 large companies, producing various commodities, were analysed for the purpose.

Two concepts are essential to her analysis: "gross retained income" and "net retained income." The former refers to "the proportion of current income that business men can . . . elect to pay out or retain" (p. 8), after labor, materials, and other costs have been paid. "Net retained income" is what remains after purchases of capital equipment, dividends, income taxes and other nonoperating expenses have been made. The author contends that increases in the ratio of net retained income to total income mean insufficient buying power in consumer hands, insufficient, that is, to buy what was produced at the prevailing prices. She discovered that quite conservative practices, though not altogether consistent ones, were followed in most businesses. This and other facts lead her to conclude (in the final chapter) that at least minor depressions are inevitable. Such a conclusion is hardly novel. Indeed, none of her conclusions, regarding the cause and cure of business cycles are novel. But through painstaking workmanship and the selection of good analytical concepts the author reveals the flow of business funds to the reader clearly. The author's sprightly style is a further recommendation.

The Woman's College, F. H. Bunting
University of North Carolina

The Boulder Canyon Project. By Paul L. Kleinsorge. Stanford University: Stanford University Press, 1941. Pp. xiv, 330. $3.50.

Professor Kleinsorge presents a clear and interesting account of the historical and economic aspects of a project that is in many ways the most fascinating engineering feat that has been performed in the modern world.

The project includes not only the dam and associated power plant but also the facilities for providing water for the Imperial Irrigation District and is closely linked with the aqueduct and pumping stations which deliver water from the Colorado River to Los Angeles and other southern California communities.

In view of the fact that the dam was originally and officially named "Hoover Dam" and Professor Kleinsorge could find no evidence that a change to "Boulder" had been formally and officially made, he concluded that the legal and proper name is still "Hoover Dam." After several proposed sites for the dam had been eliminated, Boulder Canyon and Black Canyon remained. Black Canyon was the location finally selected but an earlier tentative decision to make Boulder Canyon the scene of operations gave its name to the project.

The Boulder Canyon Project developed from the precarious situation of the Imperial Valley. Had it not been for the desperate need for flood control it does not seem likely that the project would have been consummated until some future time. It is through the sale of electric power, however, that the project has been put on a self-liquidating basis. Since there are no sizable markets for electricity in the vicinity of Black Canyon, the power project could not be developed until long-distance transmission became feasible.

Black Canyon provided an exceptionally favorable location for a multiple-purpose dam to be financed by the sale of electricity. Hoover Dam, which rises 727 feet above bedrock, is easily the world's highest dam. Its reservoir, Lake Mead, has more than three times the capacity of the Grand Coulee reservoir and will hold 50 per cent more water than can be stored behind the Fort Peck Dam when it is completed. The strategic location of Black Canyon for power purposes is evidenced by the fact that although the ten major dams recently constructed and now being constructed by TVA will cost almost exactly three times as much as Boulder, they will produce only 70 per cent as much electricity. Grand Coulee Dam, however, will contain more than three times as much concrete and generate almost twice as much power as Boulder.

Since the Colorado River Basin includes parts of seven states and of northern Mexico the project called for cooperation between the federal government and the states involved. Herbert Hoover, then

Secretary of Commerce, served as chairman of the Colorado River Commission and signed an agreement with representatives of the seven states in November, 1921. The principal provision of the compact is that the upper basin states, Colorado, New Mexico, Utah, and Wyoming, are allowed to appropriate in perpetuity 7,500,000 acre-feet of water each year, provided they permit a like amount to pass to the states of the lower basin; Arizona, California, and Nevada.

Six state legislatures ratified the compact during 1923 but it was defeated in Arizona. This state refused to become a party to the compact until an agreement could be reached in regard to the division of water between Arizona and California. Thus far this has not been accomplished. In 1929, Congress enacted legislation making it possible for six states to make the compact effective. Arizona took the issue to the Supreme Court which upheld the legislation in a decision delivered by Justice Brandeis. Thus the Boulder Canyon Project is a landmark from both an engineering and a legal point of view.

Southwestern and Duke University RALPH C. HON

Unfair Competition. By John Perry Miller. Cambridge, Mass.: Harvard University Press, 1941. Pp. xiii, 438. $4.00.

The passage in recent years of the Robinson-Patman Act, Wheeler-Lea Act and other measures affecting competitive practices and governmental authority over them makes a review of the problem of unfair competition very pertinent. Dr. Miller stresses particularly the role and activities of the Federal Trade Commission. The legal approach is supplemented by comprehensive economic analysis within the framework of recent monopolistic competition theory. The historical development of the problem is reviewed, including the common law doctrine, the relationship of the several antitrust acts and the N.R.A. Special attention is given to price discrimination, tying and exclusive arrangements, conspiracy and coercion, resale price fixing, trade practice conference rules, and the basing point system. The mere listing of these subjects indicates that the coverage is more extensive than indicated by the title. There is also presented an analysis of the operation of the price system with emphasis upon such matters as:

costs and their relation to price; short-run price in pure competition and under monopolistic conditions; the effects of price control; effect of price policies upon allocation of economic resources; and price policy and the business cycle.

The traditional approach to the problem has been legalistic and concerned with preserving "*freedom to compete in any manner short of unfair or predatory practices* . . . and . . . gave little attention to the results of various policies or market conditions" (398). According to Dr. Miller, however, "An effective policy with respect to trade practices must consider the significance of each practice in the general milieu in which it is pursued. To isolate and define a practice and to develop a rule of policy with respect to it without any regard to the industries and market structure is to simplify the problem beyond recognition." Such an approach calls for more emphasis upon economic rather than legal analyses in attempting to ascertain the prevalence of unfair competition.

The problem of establishing a more workable competition is also taken up. The author does not favor a pulverization of industry as a means of accomplishing this end. He points out "much might be done by a revision of policy with reference to corporate law, patents, mergers, the ownership of natural resources, and manufacturers' control of channels of distribution." He also suggests the need for a control of the trade practices of monopolistic industries "aimed at inducing practices which will lead to good results in terms of the level of employment, efficient production, the allocation of resources, the distribution of income, etc." The diversion of resources from "excessively competitive industries" to the monopolistic industries by fixing minimum prices for the former and limiting their output and new investment is also viewed favorably as a means of making competition more workable. Finally, he concludes, "Basic market structures must be remodelled and positive types of trade practices must be prescribed." There would be much more agreement on the feasibility and desirability of the first few measures than on the last few.

This book is written primarily for the economist rather than the layman. The style is ponderous and the method of treatment leads to repetitiousness in many cases. However, the teacher will find in this volume a useful summary of various aspects of the prob-

lem of unfair competition, as well as a good analysis of its economic implications.

New York University JULES BACKMAN

Industry Goes to War. Edited by Cecil E. Fraser and Stanley F. Steele. New York: McGraw-Hill Book Co., 1941. Pp. vii, 123. $1.50.

This volume is a collection of articles resulting from the interest of the Harvard University staff in industrial mobilization and the economics of national defense. It will serve a real need in furnishing authoritative material for student and citizen groups wishing to have a better understanding of the fundamental problems involved in integrating our industrial efforts for national defense.

For 17 years the War Department has studied this problem of industrial mobilization and there has evolved the joint Army and Navy Industrial Mobilization Plan. This plan includes "procurement planning by the Army and Navy," and the "control of all necessary economic resources in support of the national war effort." Instruments now being developed and tested as a means of reaching the goal of industrial mobilization are here appraised in the light of actions taken in other countries. Among these the use of educational orders, negotiated contracts, a system of priorities and other like measures are discussed.

The impact of this industrial mobilization program is illustrated through specific industries, and attention is called to the advance planning which can be done by industrial management and labor. An appraisal of the capacity of industry to meet both the defense requirements and the needs of the civilian population indicates the probable economic dislocations which will result. Minerals are surveyed together with possible substitutes available to the United States in this effort of mobilization.

The financing of this program requires government assistance and "the examination of World War experience and analysis of the present status of lending agencies lead to the conclusion that the government has at its disposal instruments far more effective in implementing its program than was the case in 1917."

The contributors to this volume have presented fundamental thinking on American industrial armament. They have wisely

avoided the use of statistical detail which will quickly lose its significance. The volume will add much of value to the expanding list of source material on this and related subjects.

University of Tennessee T. Levron Howard

Balancing and Hedging an Investment Plan. By Walter Lagerquist. New York: Ronald Press Co., 1941. Pp. vi, 296. $3.50.

This very timely and interesting book written primarily for the investor by one with long experience in dealing with practical investment problems is "a revision and expansion of a series of technical bulletins" prepared over a period of years for the author's clients. The work is not concerned with the "analysis or intrinsic value of individual securities," but is "confined solely to an examination of the conditions which must be taken into account in formulating an investment policy" (p. 17). It deals with the problems of balancing and hedging an investment plan against long-term changes, cyclical changes, inflation and taxation, and in addition presents a plan of investment which every investor and advisor sooner or later makes" (IV).

The book consists of four parts. Part II—The Selection and Fitting of Securities into an Investment Plan—treats in the usual way the more important characteristics of industries, corporations, types of securities, and markets which are involved in working out an investment plan. Part IV—Hedging the Distribution Plan—is an excellent technical treatment of some of the major "problems of conservation in the distribution of an estate." In the reviewer's opinion, the principal contribution of the book is contained in Part I—The Economic Background of Investment Planning—and Part III— Balancing and Hedging an Investment Plan.

Part I contains a brief survey of the more important economic, social and political problems involved in the formulation of investment policy. These problems are grouped largely under (1) long-term changes, (2) business-cycle changes, and (3) inflation. After brief attention to several of the more recent and continuing long-term changes, it is argued that because of the war and its aftermath the investor must now give more consideration to "long-term economic changes" (p. 22). On the problem of hedging against inflation, it is pointed out that the appropriate method of hedging "will depend both on the character of the inflation and the needs

of the individual investor" (p. 63). After examining a number of types of investments which may be used for hedging, the author concludes that common stocks which possess certain characteristics provide the best hedge for the average investor.

Throughout the book major emphasis is given to the important and difficult problem of shifting investment position (timing of purchases and sales and proper distribution of securities) over the business cycle. Despite this emphasis, the discussion of the character of cyclical movements and methods of forecasting them are so extremely general and brief that one finds few specific guides for adjusting investment position to cyclical movements except the investment plan discussed below.

In Part III—Hedging an Investment Plan—there is presented a "step-rate hedging" plan of buying and selling securities over the cycle aimed at avoiding the possibility of serious loss from badly-timed purchase and sale of securities in a lump. Aside from the brief suggestion concerning the cyclical behavior of stocks of different industries, the investor is offered no guides for the timing of purchases except what every investor knows, namely, that he should buy when a "stock is considered relatively cheap" rather than attempt to catch the bottom of the cycle. The step-rate sales plan is based upon the assumption that most of the common stocks were bought in the lower level of the business cycle. As the total market value of the common stocks increases in the upward movement of the cycle such that the per cent of total investment in common stocks moves above some predetermined level (in the illustration 75 per cent), sales of common stocks are made to reduce them to the same per cent (70 per cent) of the total they were before the cyclical rise. As the price of common stocks continues to rise, successively larger percentages (10, 15, 20 per cent) of these holdings are liquidated with each subsequent rise in the per cent of total investment in common stocks above the percentage they were after the previous sale. Although in some cases the plan may not lead to complete liquidation of common stocks the author maintains that it is better for the investor than "attempting liquidation of the entire list of common stocks near the peak of the market (p. 191)." This suggested step-rate sales plan is not as simple and mechanical, however, as it appears. While the author fails to give sufficient emphasis to the fact, the success of the plan

depends heavily upon (1) the cyclical level at which common stocks are purchased, (2) the per cent of total investment held in common stocks at the upturn of the cycle, (3) the per cent of total investment in common stocks at which liquidation begins, (4) the rate of liquidation, and (5) decisions to increase the rate of liquidation on the basis of the market outlook.

While the discussion of many topics is rather brief and somewhat general; and though the guides to investment action, except the step-rate hedging plan, are merely a discussion of problems involved and the factors to be considered in making an investment decision, this competent book should be useful to investors and to investment students as collateral reading for a careful and systematic survey of the basic factors to be considered and the methods available for balancing and hedging an investment plan.

University of Tennessee PAUL BARNETT

Full Employment. By John H. G. Pierson. New Haven, Conn.: Yale University Press, 1941. Pp. ix, 297. $2.50.

As stated in the introduction (p. 9), the author has written this little book to " . . . show that the United States can have lasting and guaranteed full employment . . . if the American people will understand the conditions making this possible and will insist upon having them." The author has divided his book into four parts, the first of which is devoted to a discussion of the problems of Full Employment and Optimum Allocation. The second part covers the Alternative Approaches to a solution of the problem, and part three contains a description of A Full Employment Market Economy. The final part of the book contains the author's conclusions, being devoted to a discussion of Ends and Means.

In the reviewer's opinion something like full employment might be secured by merely putting every one to work regardless of the social desirability of the goods they produce or the services they render. The author has not made a suggestion so blunt as this, but he has stated (p. 60) that " . . . full employment may involve any conceivable degree of efficiency or inefficiency in the utilization of human energy." In addition, in dealing with the problems of optimum allocation and full employment the author has given the following (pp. 44–45) as the main reasons why full em-

ployment should be considered the primary problem: (1) "It would seem difficult for any one acquainted with actual conditions in the United States to doubt that as a nation we are losing more from unemployment than from errors in the way we use the energies that are employed . . . . " and ((2) " . . . when we compare full employment and optimum allocation from the standpoint of the relative precision or measurability of the concepts in question . . . full employment is by all odds the simpler and more definite concept of the two, subject to much the smaller amount of disagreement so far as its practical identification is concerned."

In the reviewer's opinion the first of these reasons is a mere assertion or unverified hypothesis and the second is partially valid only if one is willing to agree with the author's statement (p. 60) quoted above. The reviewer further questions this second reason, on the basis of the author's statement (pp. 33-34) that full employment is " . . . a condition in which only a small amount of frictional unemployment is to be found—the actual quantity, however, being determined by democratic processes." The reviewer takes the position that the amount of unemployment is highly indeterminate, that the terms "full employment" and "optimum allocation" cannot be defined in a measurable and precise manner, and that the former is, in certain respects, a function of the latter.

The author has included some unduly long sentences in this book and, in the reviewer's opinion, these tend to render the reading of certain passages unnecessarily painful. However, the inclusion of concise summaries at the end of each chapter, together with summary restatements at many vital points, has enabled the author to present an *exceptionally* well-woven, interesting, and stimulating series of discussions. Many chapters of this book contain material that will be of interest and value to those interested in economic planning.

Southwestern Louisiana Institute WILLIAM J. PHILLIPS, JR.

Principles of Economics. By Ralph H. Blodgett. New York: Farrar & Rinehart, 1941. Pp. xviii, 634. $3.50.

Professor Blodgett finds that the justification for another text in the principles of economics lies in the continuing difficulty of students to master the subject. The present book represents the

type of compromise between thoroughness and simplicity which has proved most satisfactory in his own teaching. He has attempted to resolve the problem of combining theory and practice by not permitting the theoretical and descriptive material to become too closely interwoven. The hypotheses of an ideal theoretical system are stated but are not presented as characteristic of our actual economic life in the United States.

Although Professor Blodgett suggests that the order of topics and chapters in the book is somewhat unusual, precedent may be found for a similar arrangement in other volumes of principles. The main divisions are: The Nature of Economics and Economic Systems; Production; Value and Price; Distribution; Money, Credit and Banking; Foreign Exchange and International Trade; Price Levels and the Business Cycle. There is much to be said in favor of the treatment of distribution immediately after the analysis of value and price.

The effective presentation to students of the subject of value has always been a source of difficulty to teachers of economics. This problem has in no wise been diminished with the special emphasis now usually given to monopolistic competition. It is particularly noteworthy that the organization of the section on value in Professor Blodgett's book is based on his experience as a teacher. For several years, he states, "I would run through the whole of competitive price determination in all periods of time, then all the way through the determination of monopoly prices, and finally into price determination under monopolistic competition." This plan was not found to be successful. Hence in the present volume emphasis is placed on time analysis rather than on conditions of the market. Thus short-run, intermediate and long-run prices are considered in turn in all three market conditions—competition, monopoly and monopolistic competition. Certain modifications in terminology have been made, as for example, in the replacement of the Law of Supply and Demand by the Law of Short-Run Competitive Price, and the change of Fixed Supply to Perishable Fixed Stock.

The business cycle which has come to hold a central place in the mind of many economists is not, in the view of the author, the "heart of economics." Consequently, in the chapter on interest,

the approach is that of a long-run analysis which does not involve such factors as the business cycle, fluctuations in the price level, or the "liquidity preference" doctrine of Mr. Keynes. The book is well written, closely reasoned and is enlivened with apt comparison and keen illustration. At the end of each chapter there is a splended list of questions and problems.

University of Virginia TIPTON R. SNAVELY

Southern Industry and Regional Development. By Harriet L. Herring. Chapel Hill: University of North Carolina Press, 1940. Pp. xiii, 103. $1.00.

As an analysis of what the southern states have and require in manufacturing industries this is an invaluable study. The principle of "optimum production" on which it proceeds was given general formulation in Professor Howard W. Odum's *Southern Regions of the United States*, and Dr. Odum discusses it further in a Foreword to this volume. Miss Herring applies the principle to manufactures, outlining three subprinciples as the basis for her analysis (p. 5): (1) "A state or region should manufacture for the national market those goods for which it is peculiarly suited because of climate, of natural and agricultural resources, and of skills." (2) "A state or region should manufacture for its own use goods for the production of which it has sufficient resources and skills." (3) Also, "a state or region should develop, at least for its own use, the manufacture of those goods for which it could economically and profitably produce the raw materials and develop its potential skills." These subprinciples determine the categories into which the author's treatment falls. Statistical data, comprising the bulk of the volume, are drawn from the *Biennial Census of Manufactures*.

The eleven southeastern states have 21.5 per cent of the nation's population. Miss Herring counts an industry as manufacturing for the national market when more than that proportion of its wage earners is located in the Southeast. Such industries she places in her Group I. There are 44 of these industries all told, all of them based directly or indirectly on some crop or natural resource peculiar to the Southeast, or found more plentifully there than elsewhere. In respect to these industries the region is

fulfilling the first rule for optimum production in relation to its special products and natural resources. It is striking to note, however, that for the most part these 44 are low wage, low value-creating industries, and many are stationery or declining. They do not bring industrial balance. Hence, the Southeast should encourage industries of the types in Groups II and III.

Group II industries manufacture largely for the region. Some 39 are analyzed in detail. For these the Southeast has the resources, plus a certain amount of experience and skill. It should have more of these in order more nearly to balance production. Similarly, it should develop its Group III industries, especially because they would help balance the region's agricultural economy. These are often small, local enterprises, using agricultural products, whose requirements for technical and skilled workers could be met readily. This group of industries the author would like to see encouraged, at least to the point of supplying the region's own needs. The above points from the analysis indicate its scope.

The reader is very much stimulated by Miss Herring's admirable material until he begins to ponder how her suggestive proposals for balancing the southern economy are likely to be carried out. Something akin to genuine planning, federal and regional, would be necessary to realize the "optimum production" program. As Miss Herring points out, "The solution will not just grow." She suggests that a search is going on for "realistic planning." But is she not oversanguine when she says that "the planning movement has grown until it encompasses well-nigh the whole of our society" (pp. 4–5)? In the South, she states, planning boards "are acutely interested in industrial development and a better balance between agriculture and manufactures." It would be valuable if some future study gave us a comprehensive picture of the constitution and work of these southern planning boards. In no wise are these remarks meant to detract from the contribution of Miss Herring's excellent data. The research scholar would indeed be limited if he should confine his contemporary investigations to such projects as are likely immediately to be applied.

Institute of Labor Studies,
Northampton, Mass. KATHARINE DU PRE LUMPKIN

The Geographic Basis of American Economic Life. By Harold Hull McCarty. New York: Harper & Brothers, 1940. Pp. xxiii, 702. $3.75.

The book, designed for freshman courses in economic geography, gives a regional analysis of the economic development of United States and a comprehensive and up-to-the-minute appraisal of the nation's resources and industries. The nation is divided into ten major regions each of which is characterized by a distinct type of economic development. Each region is described in terms of the natural and human factors that have been most influential in its development.

The order of the book is to describe for each region, first, the natural features—location, surface, features and climate; second, the types of development associated with that region such as mining and quarrying, forestries, fisheries and agriculture; and third, the cities, manufacture and trade. The book contains approximately 100 maps and charts, questions and exercises, annotated bibliography and glossary of terms.

The approach is one of geography and ecology; the method is that of geology but the concepts are those of economics. The fundamental purpose of economic geography is regarded as the explanation of the differences in economic development which occur among the various areas. The first problem is that of classifying, measuring and delineating the measurable features of economic development. The second problem is that of ascertaining the factors which cause different types of development to occupy different areas. The emphasis is primarily on production and exchange and only incidentally on distribution and consumption.

The location question is first attacked by discovering the types of productive activity which select their location in order to be near other types and those which locate independently. The main problem is to explain the latter because their existence in an area largely explains the location of the former types. In other words, it is a matter of explaining the location of the key industries to explain that of the rest.

The chief factors involved in explaining the location of key industries are (1) natural factors—soil, climate, topography, minerals, forestry and game, (2) human factors—the culture and

history of man, (3) technology, (4) social control devices, and (5) the general aspects of the economic system.

The commendable features of the book include the author's excellent appreciation of economics and geography and their interaction, the fine handling of manufacturing, the thorough consideration of cities, the adequate emphasis on certain locational factors as freight rates, etc., and the stress placed upon the institutional nature of economic life.

Louisiana State University ERVIN K. ZINGLER

Economic Geography, A Regional Survey. By R. H. Whitbeck and V. C. Finch. Fourth Edition. New York: McGraw-Hill Book Co., 1941. Pp. xii, 647. $3.50.

Long an old standby in the field of economic geography this text has set the pace for a regional approach to the subject. The recent edition brings the material up to date, taking cognizance of chaotic world conditions as far as possible upon the thesis that war influences, but hardly changes, the inherent capacities of the various regions of the world to produce.

Although the text is essentially regional, individual topics merit treatment in many instances. The authors accomplish this by dividing the world into regions (countries, or groups of countries, in most cases) and then giving attention to various types of production and activities within these broad limits. Approximately one-half of the book is devoted to the United States and Canada as Anglo-America, and the topical method is employed in discussing this huge region. One chapter deals with grain and forage crops, another with fuel and power, and so on to include the sphere of man's economic activities in these two countries.

The book stresses *regional contrasts* which bring to the fore those geographic influences largely responsible for molding the economy of any given region. Such areal characterizations must freely make use of relief, climate, natural vegetation and other fundamental factors of the geographic environment to show their actual or potential adaptation for human utilization. Chapters dealing directly with the physical environment, however, are lacking for it is assumed that the student is familiar with basic geographic factors if not with their effect on economic activity.

Illustrative material consists of 315 figures, including well-

chosen maps, graphs and pictures. In general the illustrations are appealing in their simplicity and clarity. Multiple-purpose maps and graphs for the most part are lacking.

University of Alabama G. ETZEL PEARCY

History of American Business Leaders; Vol. I. By Fritz Redlich. Ann Arbor, Mich.: Edwards Brothers, 1940. Pp. viii, 185. Paper covers.

This publication is difficult to read and to review. Since it is offered by the author as one of a series, the reviewer hesitates to be too dogmatic in expressing his opinions. The first third of the book conveys an extremely unfavorable impression, but this is modified somewhat by the remaining pages. Since no explanation is given regarding future additions to the series, it is difficult to evaluate the first release relative to the title.

As far as this volume is concerned, its title is misleading, although the subtitles found on the inside pages give some clue to its contents. Since the book is written by a German who came to this country in 1936, allowance should probably be made for what appears to the reviewer to be a pro-German bias in unfair comparisons between German and American, English, and other countries' contributions to modern industrialism. A large part of the discussion is economic history rather than biography, with a theoretical slant on topics and persons discussed.

Examples of unscientific treatment, careless selection of sources and poor editing are easy to find. Theoretical writers in addition to Veblen are generously used where factual reports like those of Taussig and Joslyn[1] would seem to be more appropriate for a history.

Admitting that the publication may have some merit as a reference book for dates, names and quotations, the reviewer prefers to reserve any favorable comment until further releases of the series have been examined.

University of Arkansas PEARCE C. KELLEY

Economic History of Europe. By S. B. Clough and C. W. Cole. Boston: Heath & Co., 1941. Pp. xx, 841. $4.00.

This text differs from the ordinary economic history of Europe

[1] *American Business Leaders.*

in at least three significant respects, namely, the emphasis on capitalism in its various ramifications, the attention paid to economic theories and the space devoted to colonial expansion. The teacher of economic history may regard these departures with disfavor. He may even suggest that the title of the book be changed to "The Evolution of Capitalism." He is likely to regard the emphasis on economic theory as too marked for an introductory text. The teacher may also question the rather extensive treatment accorded to colonial expansion. The attitude of the authors, however, is probably justified if the reader accepts their definition of economic history, namely, "a thread which in the maze of historical events, leads the student to those of most enduring significance."

The emphasis resulting from that viewpoint of economic history may prevent the learner from seeing conditions in individual countries and from obtaining a clear view of the economic development of those countries. Here and there in the text wrong impressions are conveyed to the reader by sweeping statements, due at times to hurried proofreading. Such may be the case from statements on pp. 34, 67, 245, 393, 447, 535, 564, 690, and 753. An analytical index and the use of some graphs would improve the book. The use of the same money unit in all tables, notably the lengthy table on p. 614, would also prove helpful to the student.

This text has numerous tables, 18 plates of good illustrations, and 15 excellent maps. The book is well organized and well written. Its 24 chapters fall under three divisions: The Medieval Era, 600–1500; Early Modern Times, 1500–1776; and Modern Times Since 1776. The material preceding 1776 was written by C. W. Cole; the remainder by S. B. Clough. Part III is divided into three phases: 1776–1850, 1850–1914, and Since 1914. Two or three illustrations of good or emphatic phraseology may be given in closing the review of this good text. On p. 217 Dr. Cole observed: "The town of Potosi, a roaring, drunken, mining camp filled with crime, vice, gambling, and violence . . . . " On p. 283 he commented: "Law and his bank were always engaged not only in high finance but also in low politics." On p. 415 Dr. Clough remarked: "Women might whirl their spinning wheels at a buzzing rate, men might weave with vim and vigor, and horses might plod

wearily on in treadmills to turn windlasses but they could not furnish the power necessary to run heavy machines."

University of Kentucky WALTER W. JENNINGS

Land Tenure Policies at Home and Abroad. By Henry William Spiegel. Chapel Hill: University of North Carolina Press, 1941. Pp. xii, 171. $3.00.

For the past several decades the problems of land tenure and farm tenancy in particular have increasingly engaged the attention of agricultural economists and rural sociologists. Notable among the leaders in this respect have been Henry C. Taylor, who devoted seven chapters of his pioneer text in agricultural economics to a penetrating analysis of the situation in the United States and in England; Charles J. Galpin, who around 1920 carried out the first real nation-wide field investigation of the matter, resulting in such disturbing findings for that time that it never quite reached publication; Lewis C. Gray, who as a Southerner with an intimate first-hand knowledge of the direness of tenancy problems in this region and as head of land economics in the Bureau of Agricultural Economics, gave finely objective point to the investigations of the subject, greatly influencing national policy in this regard; and the late E. C. Branson, of the School of Rural Social Economics, University of North Carolina, the productive results of whose writings, researches, and speeches all over the South it would be impossible to overestimate. These pioneers, and the many who took up the cudgels with and following them developed a national sentiment which has led to the Bankhead-Jones Farm Tenant Act, the Farm Security Administration, and has had definite bearings on soil conservation and other policies relating to a better balanced rural economy.

Naturally, a large body of literature has come about—government reports, Congressional hearings, experiment station bulletins, technical volumes, and popular fiction. As a result, we now know much more about farm tenancy than ever before, but by no means all needed to be known. In spite of this plethora of literature, Spiegel's *Land Tenure Policies at Home and Abroad* makes a definite contribution along two particular lines: (1) the legal backgrounds of land tenure; and (2) its presentation of the Euro-

pean point of view concerning the problem. The author was trained as a doctor of jurisprudence at the University of Heidelberg, and in agricultural economics at the University of Wisconsin. At the present time he is assistant professor of economics at Duquesne University in Pittsburgh.

The major topical headings give a comprehensive picture of the scope of the volume: Foundations of Land Tenure Policy; The Legal Backgrounds of Land Tenure in the United States; Facts and Factors in European and American Land Tenure; Farm Tenancy Policy; English Land Tenure Policy; and Land Tenure under the Swastika. There is also an excellent bibliography which is particularly valuable for the foreign titles listed.

The author displays the diligence and thoroughness so often characteristic of the European scholar, and in the process brings his legal training significantly to bear on the development of the present land tenure situation in the United States. He discusses the economic foundations of farm tenancy, in this connection stating that Pigou "is virtually the only economic theorist of repute who had ever attempted to vindicate farm tenancy policies on the basis of strictly economic reasoning." It is pointed out that there is a striking difference in the social esteem in which tenancy is held in the United States and in Europe. In this country, it is viewed generally as a social disease; while "in many European countries, farm tenancy has been the pacemaker of agricultural progress and is regarded as a sound and necessary component of the tenure system." It is this difference in point of view, the various factual data presented on the Old World situation, and the analysis of the comparative ways of approaching the matter in the two parts of the world that make this volume unique in its totality. While not flawless in detail with regard to the American scene, it is well worth the careful reading of the economist who would broaden his perspective on one of today's most important problems in land economics.

University of Virginia WILSON GEE

Farm Ownership, Tenancy, and Land Use in a Nebraska Community. By Robert Diller. Chicago: University of Chicago Press. Pp. vii, 192. $2.00.

Here is a refreshingly unorthodox monograph on modern tendencies in land tenure. The author, a student of law at the Chicago Law School asserts that the recent increase in tenancy does not stem, as commonly supposed, from growing instability of land ownership; rather, the reverse is true. In the community studied, tenancy certainly has risen considerably between 1910 and 1938, but the greater part of the land is now being held by the same families as those of the earlier date. That these two tendencies are functionally related is evidenced by the reverse picture presented by the period between the first settlement (*ca.* 1870) and World War I, when land changed hands rather frequently and little was leased. The reasons are not far to seek. The older period was one of quick profits from farming due to low costs, a favorable weather cycle, expanding markets for corn and wheat. "Up to 1910 . . . a man could expect to pay for a farm in ten years at most. . . At no time in the last 25 or 30 years has the old auspicious relationship of values, weather, yields, and profits been re-established. Farmers . . . who used to be eager and able to purchase land when it was relatively a quick and easy affair, . . . have become, more and more, tenants rather than landowners" (p. 46). The result is, that ownership of land rests now predominantly with old men, women of all ages and undivided estates, while the active farmer-tenants consist mostly of young and middle-aged men. A further result is that there is no sharp social or economic distinction between owner and tenant; they are "in a sense, joint venturers," often belonging to the same family. The Diller tenants "need not, . . . and do not worry about insecurity of tenure." In short, the high proportion of leased land "is a normal result of the development of stable tenure of the fee," and a sign of "the economic maturing of the community."

These contentions are heavily and ably documented throughout the text and in special appendices. Thus the study is certainly a welcome and thought-provoking contribution to the baffling problems of modern land tenure. Its weakness seems to lie, however, in the often sweeping conclusions and criticisms the author draws from his findings. His study includes, after all, not more than 300 farms, i.e., "a collection of families that has long been identified with the village of Diller" and is closely

knitted together by marriage and blood. We wonder, therefore, whether the almost patriarchical picture which the author draws of his native community is indeed "fairly typical of the prairie part of the Middle West." Many would wish it were.

University of Virginia RUDOLF FREUND

Accounting Principles and Practices. By Henry Rand Hatfield, Thomas Henry Sanders and Norman Lee Burton. New York: Ginn & Co. Pp. 593. $3.75.

This is a worthy addition to the long list of accounting texts for beginning students. It presents no striking departure from the so-called balance sheet approach in its order of presentation of materials. Fundamental accounting processes are covered in the first 12 chapters. The next two chapters deal with the Voucher System and Business Papers and following this are chapters on Partnership Accounts and Corporation Accounts and on special problems relative to statement form, content, and analysis. A convenient division for a two-semester course may thus be made after Chapter 14.

The book is a scholarly presentation of accounting fundamentals with emphasis on principles rather than procedures or technique. In the words of the authors it emphasizes "what the accountant is trying to do, and the reasons for so doing, rather than the detailed rules for recording individual items." This may appear somewhat overdone in the relative simplicity and minimum quantity of illustrative materials, and in the failure to present textual material on the recording of transactions involving negotiable instruments. The discussion is clear-cut and easily understood.

By utilizing the latest discussions and experiences the authors seek to meet the demand of recent years for clearer definition of the best accounting practices, and for their more general adoption. In this connection they discuss alternative methods of handling unamortized discount on bonds retired before maturity, and the disposition of unusual gains or losses through Profit and Loss or direct to Surplus. A complete chapter is given over to Published Reports of Corporations, with particular reference to narrative and graphic content.

Following the 450 pages of text matter, divided into 25 chapters,

there are 142 pages of laboratory problems and practice sets which provide adequate practice materials for use either with the student who takes only a one-year course in accounting as part of a general education, or with the one who is beginning what he expects to be a series of courses in the subject.

The publishers present the materials with sizes and styles of type which are well chosen and clearly printed. The pages are of good appearance and easily read.

University of Kentucky ROBERT D. HAUN

Elements of Accounting. By Raymond W. Coleman. New York: McGraw-Hill Book Co., 1941. Pp. xi, 294. $3.00.

Professor Coleman has here undertaken to fill a very pressing and ever-increasing need for a condensed treatment of accounting principles and procedures to be used as a text for a course shorter than one year. This need arises from the demand for some interpretative knowledge of accounting by students in technical fields and from the increasing pressure for time in the various curricula.

With the vast amount of material to be covered in the course normally, such a condensed treatment must either eliminate some part of the material or condense the treatment of each part. The first alternative is undesirable unless the text material is selected to meet the needs of a particular course in a particular institution.

Professor Coleman has chosen the second and perhaps better plan. He has included all of the traditional subject matter and treated it in a less exhaustive manner. He very appropriately begins with the basic accounting equation, develops the basic statements, evolves and explains the accounting cycle, (including the year-end work centered around the work sheet) and indicates the need for and methods of subdividing the ledger and journal. He includes a discussion of the problems of valuation and the special problems of the partnership and the corporation. He unfolds and explains all of this material rapidly and logically with adequate illustrations. Following this is a two-chapter discussion of cost accounting in which he gives a running picture of the basic cost accounting procedures. The final two chapters discuss "statement analysis", including the various analysis ratios and their uses. There are 50-odd pages of good illustrative practice problems in the back of the book.

All in all, Professor Coleman has successfully condensed the details of his discussion with a minimum loss of lucidity and continuity. He has done a difficult job well.

North Caroline State College, C. B. Shulenberger
University of North Carolina

Cash Benefits Under Voluntary Disability Insurance In The United States. By Elizabeth L. Otey. Washington, D. C.: U. S. Government Printing Office, 1941. Pp. vi, 117. Paper covers. 15 cents.

Teachers of life insurance and casualty insurance who find the available textbooks in those fields somewhat less than adequate in their treatment of the sickness, accident and permanent disability aspects of ordinary life, industrial, group, fraternal, cooperative and casualty insurance, will find that the meticulous scholarship and concise but readable language of this survey of the recent literature and statistics of the extent, costs, benefits, problems and shortcomings of the various forms of voluntary disability insurance in the United States make it almost required reading.

Of special interest to teachers of social insurance are some of the inescapable conclusions of this study:

(1) Voluntary disability insurance has had an undisputed field in the United States, and with surprisingly meager results. The cash benefits from that insurance represent less than 5 per cent of the nation's costs and losses from sickness, accidents and disablement. Only a small fraction of the working masses who are most in need of protection against the economic effects of nonoccupational disability have such insurance.

(2) For the great majority of those that do have the benefit of some insurance, the protection is fragmentary and inadequate. And it is extremely unequal in the character and extent of its benefits. Wage earners who particularly need protection because of their high morbidity pay more for it than other classes of the population; similarly of negroes, women, etc.

(3) The history and experience, both of commercial and of cooperative insurance in the United States and of social insurance abroad, indicate that the risk of disability is not suited to voluntary, private insurance and that compulsory, social insurance

"would seem to be" the only means of adequately protecting the individual and society at reasonable cost.

Chapel Hill, N. C. HARVEY LEBRUN

Property Insurance. Vol. II. By John H. Magee. Chicago: Richard D. Irwin, Inc. Pp. xv, 800. $4.00.

Of the same comprehensive character as the author's *General Insurance* (1936) and *Life Insurance* (1939), is this latest addition to insurance teaching materials. Although it is an outgrowth, in part, of his own teaching and, in part, of his practical experience in directing an agency that deals in pretty closely related lines of insurance, the contents of the book go beyond the requirements alike of students and of workers in the field of property insurance, and include a chapter on Employers' Liability And Workmen's Compensation Insurance. This, on the somewhat far-fetched reasoning that a business operation is a form of property and that these coverages are essential to the proper maintenance and protection of such property.

On the same reasoning, life insurance that is taken out for strictly business purposes—to protect one's credit, or one's interest in a partnership or in a "key man" in a corporation, or one's mortgage, or installment sales, or to protect one's estate against the possible ravages of the tax collectors, bill collectors, etc.,—would be an equally appropriate subject for textbooks on property insurance. On that basis, all distinction between personal and property insurance would be obliterated. For all property belongs to persons of some sort, and all insurable risks of persons can be stated in the form of property values.

Much more in line with actual practice and teaching requirements would have been a section on the newest form of property insurance in America: property life insurance—which "guarantees the preservation, renewal and reproduction of capital, placing liquid funds at the disposal of the insured property owner for extensive alterations, modernization and general improvement, and insuring the death of the property whenever it occurs [with the result that] permanent safeguard and stability are established for capital goods."[1]

[1] Richard T. Ely, in Foreword to Hans Heymann's *Property Life Insurance*.

However, since this useful 800 page book undoubtedly costs no more than it would if it did not have these 40 pages of excess content and weight, one perhaps should not find too much fault with its superabundance of riches. Discriminating problems and searching questions for review at the end of each chapter add to the usefulness of the text. The "Selected References" on the various topics, however, would be considerably more useful if they were selected with a view to more detailed or more advanced study, rather than to indiscriminate bibliographical comprehensiveness, and if they contained specific citations to the relevant chapters and page numbers.

Despite these minor defects, this work is a considerable advance over the previously available textbooks on property insurance, both in scholarliness and in readability as well as in the comprehensiveness of its treatment of the various insurance lines that it deals with and—what is more important—of the general considerations that apply to all or most lines of property insurance.

Chapel Hill, N. C. HARVEY LEBRUN

STATE REPORTS

ALABAMA

Industrial activity in Alabama as reflected by the composite index prepared by the Bureau of Business Research of the University of Alabama showed a slight decline in September from the level of August and a rather decided decline from the position in July. This tendency to decline from the high levels of the summer is larely a reflection of the influence of coal in which a very decided decrease took place. The decrease reflected in the Alabama index is contrary to the tendency followed by the index of the Federal Reserve Board for industrial production in the United States.

* * * *

A number of rather interesting developments have taken place in Alabama during the late summer and fall of 1941. Some of these happenings which may be of interest to students of different lines of economic activity may be summarized.

The dairy industry of Alabama has been operating under a milk control law which sets up the state board with authority to set minimum and maximum prices. To date the price-fixing activities of the board have had to do with the fixing of minimum prices. With increasing costs, milk distributors have been asking for increased prices. These requests precipitated a crisis when the Governor of the state asked the milk board to postpone action until cost studies could be made to indicate whether increased minimum prices were justified. The board resigned and after a number of conferences with a special advisory committee, the Governor appointed a new milk board on October 28.

The establishment of new plants and the expansion of old plants, particularly those connected with defense, have been developments of major importance in the state. At the meeting of the Alabama State Chamber of Commerce October 9, the president of that organization stated that approximately one-fourth of a

billion dollars of new capital has been invested in Alabama industry during the past 12 months; of this approximately one-half was from private and one-half from governmental sources. The most important developments have centered around the establishment of various types of ordinance plants in northern Alabama, the building of an aluminum industry in the Muscle Shoals District and the development of ship building in Mobile.

As has been the case in the country as a whole, strikes and labor trouble have had a decided effect on economic activity. Since so much of the industrial structure of Alabama is centered around iron and steel and that industry is in turn dependent upon coal and coke, the labor problems of the coal industry, both in the captive and independent mines, have a very direct effect upon the state. In addition to these the Tennessee Coal, Iron and Railroad Company had a short strike in its steel mills which was brought to a close on September 29. Also the Alabama Dry Docks and Ship Building Company, the largest of the Mobile ship building establishments, was seriously hampered in its operation during October by labor troubles.

* * * *

From the point of view of government finance, interest is centered largely upon the accumulating surplus in the state treasury and the insistent demands of those interested in public education that a special session be called to appropriate the surplus accumulating in the Educational Trust Fund to provide relief to the public school system.

University of Alabama H. H. Chapman

KENTUCKY

Kentuckians adopted two amendments to their 51-year-old constitution at the November election. One permits any county that wishes to do so to buy and use voting machines at primary and general elections. The second authorizes distribution of not to exceed 10 per cent of the common school fund on other than a per pupil basis. It is the hope of the administration that the extra assistance to poor counties made possible by this law may be obtained without an actual reduction of the present per capita amount to richer counties.

The law providing for escheat to the state of "dead" bank accounts has been ruled valid by one circuit court and invalid by another. The first case has been appealed to the state's highest court.

* * * *

"Meetings where most of the research is done into the quality of the liquor" is the way the Attorney General has designated conventions attended by state officials. The attack which his office has made upon out-of-state travel has led the Commissioner of Finance to refuse all such travel allowances until the Court of Appeals shall have ruled upon their legality.

* * * *

The Franklin Circuit Court recently held that salaries and commissions the state pays for professional services are exempt from the constitutional limit of $5,000 a year. The court held that the limitation applied only to public officers. This long-drawn-out case appears at last to be due to receive a Court of Appeals test strictly upon its merits. If the court follows its own precedent, the lower court will be overruled. All salaries in excess of $5,000 have been held to that limit by the Commissioner of Finance on advice of the Attorney General pending a court test. (The Constitution excepts the Governor.)

* * * *

The 1940 Kentucky liquor and wine "fair trade" act was recently held, for the second time, to be unconstitutional by the same circuit court. Under the act, wholesale dealers were required to mark up their sales prices to retailers at least 15 per cent above cost, and retailers, in turn, to add at least 33⅓ per cent more in selling to consumers. The first mark-up applied after federal and the second after state taxes were added to cost of the liquor. For administrative purposes the Department of Revenue has licensed only slightly in excess of 30 wholesalers. This group enjoys a monopoly on all legal liquor sales, the profits of which will be further increased by the recent $1 increase in the federal whiskey tax. No better illustration could be desired of the pyramiding effect of taxes.

The federal withdrawal tax is $4.00 a gallon, and the state levies a 5 cent production (or import) tax. Fifteen per cent

of \$4.05 is \$.61. Later the $33\frac{1}{3}$ per cent mark-up is levied not only upon the \$4.66 but also upon \$1.20 of state excise. Thus the total mark-up because of tax would amount to \$6.60, of which \$5.20 actually would reach the public treasury. This assumes that the dealers take only the minimum mark-ups.

* * * *

In October the United States Supreme Court refused to interfere with Kentucky's denial of unemployment compensation to coal miners for time lost during 1939 negotiations over their union contract. The court's action on this case involved 25,000 to 30,000 claims totaling \$1,000,000 and had been awaited by Kentucky before hearings were started on similar claims filed because of idleness from the same cause in 1941. Kentucky's law denies compensation for idleness during a bona fide labor dispute. Counsel for the miners think 1941 claims are stronger because the operators "walked out on the conference and returned only at the insistence of the President."

* * * *

Governor Johnson has written Federal Security Administrator McNutt a strong letter of protest against the proposed transfer of Kentucky's \$36,000,000 unemployment compensation fund to federal hands. The Governor pointed out that the Court of Appeals invalidated an act of the legislature that transferred to the Federal Railroad Retirement Board \$1,077,593 collected from railroad workers prior to the transfer to the board of the administration of unemployment compensation for that group.

* * * *

Defense spending is credited by the Highway Department for sharply increased receipts at the state's 15 state-owned toll bridges. If the trend continues, a substantial advance in the freedom date for these bridges is in prospect. Three important spans have already been made free; the one between Newport and Cincinnati became free on Armistice Day.

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In October "bank night" in Kentucky theaters was outlawed as a lottery in an agreed judgment in Fayette Circuit Court at

Lexington. The Attorney General has pledged vigorous prosecution of any further offenders.

* * * *

The Governor has promised that if the 1942 legislative session is adjourned sine die two weeks ahead of the usual time he will call a special session to redistrict the state for legislative purposes. The great growth in the population of counties in the eastern coal area has brought grave inequalities. One senatorial district returned a population of 202,577 in the last census. On a basis of the state's population the average should be about 75,000 for each of the 36 districts.

University of Kentucky RODMAN SULLIVAN

MISSISSIPPI

The Northeast Mississippi Council, embracing an area of 25 counties, has been in process of organization for several months and has begun to function as an economic force in the state. Financed by civic-minded men and organizations, the council bears considerable resemblance to a regional Chamber of Commerce. The president is George A. McLean of Tupelo; the secretary-manager, John R. Robinson of Oxford. Headquarters are at the University of Mississippi.

The territory of the council is the northern hill and prairie section, beginning at the rim of the Delta and extending eastward to the state boundary. In per capita income, the section is one of the poorest in the United States.

The council has taken as its fundamental objective the development of diversified agriculture and of decentralized industrial operations within the area. Economic research and legislative activity are the two methods of approach which thus far have been adopted. The young organization will face a strong test at the January session of the state legislature, at which it plans to sponsor the enactment of a workmen's compensation law.

* * * *

Mississippi now ranks approximately tenth in the nation as a petroleum producing state. While its production is dwarfed by comparison with that of Texas, Louisiana or Oklahoma, it has

almost overtaken that of Arkansas. The 250 producing wells are pumping more than 60,000 barrels a day, and drilling operations are proceeding at a high rate. Production did not begin until a little over two years ago, and it had not achieved more than a third of its present level at the first of 1941. At the going rate of production and the prevailing price level for crude oil, Mississippi's output is worth at least $20,000,000 a year, or roughly 4 per cent of all income produced in the state. While current figures must be discounted for the abnormal condition of demand in the industry, it seems unquestionable that oil is assuming a prominent place in the state's economy.

* * * *

Indexes compiled by the Business Research Station of the School of Business and Industry of Mississippi State College show that business activity during recent months is exceeding that for the same period of last year by 30 to 40 per cent. Contributing factors appear to be large scale defense spending, reasonably good cotton crops, and a satisfactory price for cotton.

University of Mississippi M. K. Horne, Jr.

NORTH CAROLINA

The industrial picture continues bright in North Carolina, as employment and pay rolls increased each consecutive month between June and September. The rate of growth in manufacturing employment showed signs of declining but the same was not true of pay rolls. Cigarette production reached a record volume in September; and cotton mill activity was also at a high level. During the first nine months of the year North Carolina mills consumed almost 2,000,000 bales or about one-third more than in the corresponding period for 1940; and it is expected that the recent adoption of a flexible price ceiling will encourage the acceptance of orders for new business. A shortage of workers prevented some plants from going on a three-shift basis in July. Mills are taking on all learners legally allowed. The wooden furniture industry, in which the state is reported to lead the nation, is operating at or near capacity due to heavy defense orders and the effects of priorities upon metal furniture.

Electric power companies have scheduled $12,000,000 for ex-

pansion; and the Aluminum Company of America is constructing a 100,000 kilowatt dam at Fontana at a cost of $50,000,000. The Marine base near Jacksonville is practically completed; and a similar project is under way between New Bern and Morehead City. Contracts awarded in the state reached $47,585,000 in August—about three times the 1940 figure—and September figures are expected to show a large increase over those of a year ago. One plant now under construction in Durham under a naval contract will require the services of some 2,500 machinists, the large majority of whom must be imported or trained.

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The United Brotherhood of Carpenters and Joiners has initiated a campaign to organize employees in the wood-working plants pursuant to plans laid in the convention of the North Carolina Federation of Labor. By the end of October, Joe Boyd, representative from the Brotherhood, had succeeded in installing nine local charters and securing majorities in seven plants. In two of the latter, agreements have been negotiated; in three others, Labor Board elections are pending. In general, strikes in the state have been at a minimum. The chief problem of utilizing the labor supply lies in absorbing hosiery workers currently being displaced by the silk shortage. Employment in the largest hosiery center, it appears, has temporarily increased due to the use of broken bales of silk and to a large allotment of rayon.

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The crops of tobacco, cotton, and peanuts were all somewhat smaller in 1941 than in 1940 on account of the drought, but prices have been extremely favorable to producers. The estimate for September 1 showed that the tobacco yield per acre was 906 pounds, compared with 1,043 a year ago. Total production declined about 12 per cent. Marketing has proceeded at a record rate; and the average October price for all grades ($30.14 per hundred pounds) is the third highest for the month on record, being exceeded only by the figures for 1919 ($53.82) and 1934 ($33.67). In 1940 the October price averaged $19.42. As for cotton, the yield per acre was 26 per cent less than in 1940 and total production declined 30 per cent. On September 13, 1941, the official average base price on 10 southern markets was 17.74 cents,

compared with 9.42 cents on September 12, 1940. Farmers' receipts in 1941 for both cotton and tobacco were comparatively large.

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The spurt in industrial and agricultural circles is reflected in other economic data. Debits to individual accounts in seven leading cities were substantially higher during the summer of 1941 than in 1940. Automobile registrations and retail sales of furniture also increased, although in the last months of the year there was a slackening of growth in these departments. Receipts from the general sales tax are heavy in spite of the exemption of foods for home consumption under the new law. In the first four months of the fiscal year 1941, collections totaled about $5,025,000 or $973,000 more than in a similar period in 1940. Gasoline taxes increased about 18 per cent during the same period, indicating that the curfew and voluntary rationing had comparatively little effect upon consumption.

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Several important conferences have been held in recent months. A series of seminars and conferences in statistics was held in Raleigh during the summer under the auspices of the Department of Experimental Statistics of North Carolina State College. H. Hotelling was present, among other authorities in the field. In October a State Farm Bureau Conference was held in Raleigh at which economists and sociologists discussed problems of agriculture. On October 24–25 the Second Annual Symposium on Accounting and Taxation was held by the North Carolina Association of Certified Public Accountants in cooperation with the University of North Carolina and Duke University. Discussion centered around the Revenue Act of 1941 and recent developments in accounting and auditing procedure.

Duke University THOMAS S. BERRY

SOUTH CAROLINA

Current economic activity in South Carolina is colored by (1) a light cotton and tobacco crop, less than half of normal, and (2) extensive army maneuvers. With the smallest cotton crop

since 1878, many farmers have experienced a complete loss in their principal source of income. Merchants and other business firms in the maneuver areas, on the other hand, are experiencing an unprecedented boom. Textile manufacturers likewise continue to operate at maximum capacity with a large backlog of defense orders.

* * * *

Tax revenue receipts are heading toward a new high in the state's history. The anticipated deficit as a result of a state supreme court decision declaring unconstitutional an act for diverting part of the gasoline tax to general revenue no longer exists. Indications are that the legislature will have an easy time on convening in January.

* * * *

Defense activities and increased public revenues apparently will force South Carolina to rejoin the rank of "dry" states. When the general assembly opened in January, 1941, the "drys" introduced a prohibition bill following a mandate at a general election the previous summer. The bill was passed with an amendment specifying that sufficient funds must be on hand to offset losses from liquor taxes before the act became effective. World War II by filling the coffers of the state treasury is unexpectedly returning South Carolina to the prohibition column.

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The 171,000 horsepower Santee-Cooper River hydroelectric project is now nearing completion. In addition to relieving the severe power shortage in the state, it represents a victory for public ownership in establishing the largest hydroelectric and navigation project ever undertaken in the southern coastal region.

Clemson College WILLIAM T. HICKS

TENNESSEE

Among the local problems in Tennessee, smoke abatement has loomed large for many years. During the winter months the cities of Nashville, Knoxville and Chattanooga, as well as many of the smaller towns, are chronically blanketed with a pall of smoke, or of a smoke-and-fog combination. Memphis is the

only large city in Tennessee which is practically free of smoke, since more than half of the furnaces in that city are fueled by natural gas.

The smoke problem, which is far from trivial in the eyes of the citizens concerned, is compounded of technological, economic, and political elements. During the November convention of the Southern Economic Association, held in Nashville, a number of southern economists viewed the problem for the first time and at first hand. Others were familiar with the situation because of the existence of a similar condition in their own states. The matter was discussed at informal gatherings of the delegates rather than at the regular round-tables of the conference.

On the technical side, the smoke is created by the burning of low-grade bituminous coal in factories and homes under conditions of relatively low altitudes and low wind velocities. Fog rising from the rivers, as in the case of the Nashville basin, makes the blanket thicker. Chemists and engineers have stated without qualification that even if the factories were brought under strict smoke control, the smoke would persist so long as private homes continued to burn low grades of unprocessed bituminous coal.

The smoke-control system instituted by the city of St. Louis, Missouri, has in recent years been held up as a model to Nashville and other Tennessee cities. St. Louis, by city ordinance, prohibits the burning of coals of more than 23 per cent volatile content without the use of special furnace equipment. As a matter of practice, under the new system, most of the St. Louis industrialists and householders buy coal which has already been processed and which costs somewhat more per ton than ordinary unprocessed bituminous. After several delegations from Nashville, including city government authorities, had inspected the St. Louis system and reported favorably, the City Council of Nashville last spring came close to adopting the system, but defeated the proposition at the last moment. Among the arguments advanced against the St. Louis plan are the following: first, that it would alter the system of retail coal distribution and would react unfavorably upon the business of the distributors; second, that the higher price of processed coal would work a hardship upon the low-income householder. Proponents of the plan have

responded to the second argument with the claim that the price of the superior coal, in relation to its heating content, is no higher than the price of "cheap" coal.

In recent months a new element has entered into the smoke-abatement controversy, that is the question whether or not the requirements of the national defense program preclude this reform. One position holds that transportation shortages due to the defense load would prevent shipment of higher-grade coals, e.g. from West Virginia, while at the same time shortages of building materials would interfere with the alternative construction of local Tennessee plants for processing of low-grade coals. The data on this point appear somewhat inconclusive. Proponents of smoke control, on the other hand, maintain that national defense should not be used as a screen for a conservative policy which is in the long run costly; further they assert that the health and efficiency of the population, which are the foundations of effective defense, would best be promoted by immediate and drastic steps to curb the smoke menace. The point is made that "blackouts" should be planned affairs rather than chronic disturbances.

Fisk University ADDISON T. CUTLER

PERSONNEL NOTES

Jeannette M. Amidon has been appointed business analyst on the staff of the Bureau of Business Research and instructor in statistics at the University of Alabama.

E. H. Anderson, associate professor of economics in the School of Commerce and Business Administration at the University of Alabama, was released from part of his campus duties for the first semester to participate in the management phase of the Engineering, Science, and Management Defense Training program.

Karl E. Ashburn, head of the Department of Economics and Business Administration of Southwestern Louisiana Institute, spent the summer at the University of Wisconsin studying labor economics and institutional economics.

Walter H. Bennett, formerly of the University of Alabama, is now an assistant professor of economics and assistant director of the Bureau of Business Research at the University of Mississippi.

Truman C. Bigham has been granted a leave of absence from his professorship of economics at the University of Florida to accept the position of secretary to the Board of Investigation and Research created by the Transportation Act of 1940.

H. N. Broom, graduate assistant in accounting at the University of Texas last year, has been appointed assistant professor of accounting at Southwestern Louisiana Institute.

O. L. Browder, Jr., assistant professor of business law, has been granted a leave of absence from the University of Alabama to serve as professor of law in the Law School of the University of Tennessee.

Horace B. Brown, acting dean of the School of Commerce and Business Administration at the University of Mississippi, has accepted charter membership in the National Business and Education Council.

Malcolm H. Bryan of the Federal Reserve Bank of Atlanta was elected president of the Southern Economic Association at the annual meeting in Nashville.

Frederick H. Bunting has been promoted to the rank of associate professor of economics at the Woman's College of the University of North Carolina.

Morris Burkett has been appointed an instructor in economics at the University of Alabama.

John W. Chisholm, Jr., has been granted a leave from the University of Alabama for the remainder of the first semester on account of illness. William W. Hancock has been secured to substitute for Mr. Chisholm as instructor in economic history.

E. W. Clemens has resigned his position with the University of Toledo to accept a position as associate professor of economics at Southwestern Louisiana Institute.

Robert L. Collins has resigned as instructor in accounting at the University of Florida.

George W. Dandelake has been appointed instructor in accounting at the University of Florida.

C. H. Donovan, associate professor of public finance at the University of Florida, taught during the 1941 summer session at the University of North Carolina.

Robert B. Downes, instructor in economic history and commerce, University of Miami, is on leave as director of athletics, with the rank of lieutenant in the Navy, Key West, Florida.

Leo M. Favrot, associate professor of accounting, has resigned to become business manager at Southwestern Louisiana Institute.

William R. Fort, Jr. has been appointed instructor in business administration at Rollins College.

Bruce Futhey, instructor in accounting in the School of Commerce and Business Administration at the University of Alabama, was released from part of his campus duties in the first semester to participate in the management phase of the Engineering, Science, and Management Defense Training program.

S. P. Garner, associate professor of accounting in the School of Commerce and Business Administration of the University of Alabama was released from part of his campus duties in the first semester to take part in the management phase of the Engineering, Science, and Management Defense Training program.

Tyler F. Haygood, formerly of West Virginia University, is now senior taxation economist in the Tax Inquiry, U. S. Forest Service, Washington, D. C.

M. K. Horne, Jr., University of Mississippi, served during the fall as a special assistant to the National Defense Mediation Board's fact-finding commission in the labor dispute between CIO and the Aluminum Company of America over the North-South wage differential.

K. W. Hall, associate professor of business administration at Southwestern Louisiana Institute, is on leave with the United States Naval Reserves. He is stationed at New Orleans.

Wilburt Ham has been appointed instructor in business law at the University of Alabama.

D. Clark Hyde, associate professor of economics in the University of Virginia, resigned as secretary-treasurer of the Southern Economic Association after seven years of distinguished service in this post. His sound judgment and hearty cooperation greatly influenced the establishment of satisfactory and lasting policies concerning the joint publication of the Southern Economic Journal by the Association and the University of North Carolina. In fitting recognition of his contribution, the Association adopted the following resolution at the Nashville meeting: "Resolved that the thanks and gratitude of the Association be extended to Professor D. Clark Hyde who has served the Association so efficiently and faithfully as secretary and treasurer for the past seven years. Much of the progress of the Association during this time is the result of his untiring zeal and energy."

John E. Jacobi, formerly of the University of Maryland, has been appointed associate professor of economics and sociology at Tusculum College, Greenville, Tennessee.

Louis Johnson, Jr., formerly acting head of the Department of Business Administration at Tennessee Polytechnic Institute, has accepted a position as head of the Department of Business Administration at the East Tennessee State College.

William H. Joubert, formerly of the Florida State College for Women, has been appointed assistant professor of economics at the University of Florida.

Harold C. Krogh has been appointed instructor in commerce at the University of Alabama.

George W. Lafferty has resigned as assistant professor of accounting at Southwestern Louisiana Institute to become research consultant for the state auditor of Texas.

Joseph N. Leinbach of the University of Tampa is serving as coordinator and part-time instructor for national defense courses in management being cooperatively offered by the University of Tampa and the College of Engineering of the University of Florida.

Harry A. Lipson, Jr., has been appointed an instructor in economics at the University of Alabama.

John A. McLeland, instructor in the School of Business Administration, University of Miami, is on leave for a year under a fellowship appointment in industrial management at Harvard University.

Clifford E. Maser has resigned from the faculty of the Department of Business Administration at Rollins College to accept a business position.

Royal Mattice has been promoted to assistant professor of economics at Florida State College for Women.

Gertrude Meek has been appointed instructor in commerce at Florida State College for Women.

J. Theodore Morgan has joined the faculty at Randolph-Macon Woman's College this year as adjunct professor of economics and sociology.

Edgar Z. Palmer, University of Kentucky, was re-elected first vice president of the Southern Economic Association at its annual meeting in Nashville.

B. U. Ratchford, professor of economics at Duke University, has been appointed an editor of the Southern Economic Journal.

Luella Richey has been promoted to associate professor of economics at Florida State College for Women.

Ralph C. Russell, associate professor of accounting in the School of Business and Industry of Mississippi State College, has been appointed to the advisory board of the National Association of Teaching Certified Public Accountants.

David M. Schwartz is teaching courses in federal tax accounting at the University of Tampa.

Frank S. Scott, formerly head of the Department of Business Administration at Ranger Junior College, is now serving as an instructor of economics at the University of Mississippi.

Leonard Silk has been appointed part-time instructor in economics at Duke University.

Joseph J. Spengler, professor of economics at Duke University, was elected second vice president of the Southern Economic Association at the annual meeting in Nashville.

William J. Stanton has been appointed as an instructor in accounting in the University of Alabama. He was released from part of his campus duties in the first semester to take part in the management phase of the Engineering, Science, and Management Defense Training program.

J. W. Taylor has been appointed associate professor of business administration in the School of Business and Industry of Mississippi State College.

Wendell P. Trumbull is back at the University of Mississippi after spending the past two years in graduate study at the University of Michigan. He has been promoted to assistant professor of accounting.

E. M. Walker, assistant professor of secretarial science at John B. Stetson University, has been granted a leave of absence for 1941–42. Her position is being filled by Mrs. Marion Leonard.

James E. Ward, Clemson College, was elected secretary-treasurer of the Southern Economic Association at its annual meeting in Nashville.

Ralph M. Williams has been appointed assistant professor of accounting in the School of Business Administration, University of Miami.

T. W. Wood, associate professor of industrial and personnel management at North Carolina State College of the University of North Carolina, has become state correspondent for the Southern Economic Journal.

W. M. Young has resigned as assistant professor of business administration at Southwestern Louisiana Institute to accept a position with the Texas College of Arts and Industries.

NOTES

SOUTHERN ECONOMIC ASSOCIATION

Receipts and Expenditures for the Year Ending October 31, 1941:

November 1, 1940, Cash on Hand		$558.10
Receipts:		
Annual memberships	$690.00	
Institutional memberships	20.00	710.00
		$1,268.10
Expenditures:		
Stamps	$48.40	
Printing and supplies	60.69	
Travel	63.15	$172.24
Southern Economic Journal		466.00
		$638.24
October 31, 1941, Cash on Hand		629.86
		$1,268.10

D. Clark Hyde,
Treasurer.

THE SOUTHERN ECONOMIC JOURNAL

Statement of Income and Expense October 31, 1940 to October 31, 1941:

Cash Balance, November 1, 1940			$875.92
Income:			
From Southern Economic Association:			
Annual Membership Fees	$460.00		
Institutional Membership Fees	6.00	$466.00	

From University of North Carolina:			
Annual Grant		1,000.00	
From Subscriptions, Advertising, and Miscellaneous Sales:			
Subscriptions	745.45		
Advertising	667.49		
Miscellaneous Sales	164.58	1,577.52	
Miscellaneous Income		3.22	
Total Income			$3,046.74
Total Cash and Income			$3,922.66
Expenses:			
Printing the Journal		$2,010.36	
General Expense		452.08	
Postage		77.69	
Other Printing		41.25	
Supplies		85.85	
Total Expenses			$2,667.23
Cash Balance, October 31, 1941			$1,255.43

G. T. Schwenning,
Managing Editor.

BOOKS RECEIVED

Advanced Accounting. By Howard S. Noble and Others. Cincinnati: South-Western Publishing Co., 1941. Pp. xii, 846. $4.50.

Administrative Procedure. By Comstock Glaser. Washington, D. C.: American Council on Public Affairs, 1941. Pp. 207. Cloth $3.00; Paper $2.50.

Proceedings of the Twenty-Third Annual Meeting of the American Association of Collegiate Schools of Business, School of Business Administration, University of Minnesota, May 1–3, 1941. Pp. 136. $1.25.

American Opinion of Soviet Russia. By Broadus Mitchell. Washington, D. C.: American Council on Public Affairs, 1941. Pp. 210. Cloth $3.25; Paper $2.75.

Air Transportation. By Claude E. Puffer. Philadelphia: Blakiston Co., 1941. Pp. xxiv, 675. $3.75.

Banking Studies. By Members of the Staff of the Board of Governors of the Federal Reserve Systems. Baltimore: Waverly Press, 1941. Pp. vi, 496. $1.50.

British Unemployment Programs, 1920–1938. By Eveline M. Burns. Washington: Social Science Research Council, 1941. Pp. xx, 385. $2.75.

Business Statistics. By Martin A. Brumbaugh and Lester S. Kellogg. Chicago: Richard D. Irwin, 1941. Pp. xv, 913. $4.00.

Collective Wage Determination: Problems and Principles in Bargaining, Arbitration and Legislation. By Z. Clark Dickinson. New York: Ronald Press Co., 1941. Pp. 640. $5.00.

Credit and Collection Principles and Practice. By Albert F. Chapin. New York: McGraw-Hill Book Co., 1941. Pp. xvii, 679. $4.50.

Deep South. By Allison Davis and Others. Chicago: University of Chicago Press, 1941. Pp. xiv, 558. $4.50.

Economics of Social Security. By Seymour E. Harris. New York: McGraw-Hill Book Co., 1941. Pp. xxvi, 455. $5.00.

Economic Geography. By Bernhard Ostrolenk. Chicago: Richard D. Irwin, 1941. Pp. xvi, 804. $4.00.

Elementary Social Statistics. By Thomas Carson McCormick. New York: McGraw-Hill Book Co., 1941. Pp. x, 353. $3.00.

Fundamentals of Accounting. By Robert A. Lamberton. New York: Longmans, Green & Co., 1941. Pp. viii, 467. $3.50.

Ideologies and American Labor. By Paul K. Crosser. New York: Oxford University Press, 1941. Pp. xvi, 221. $2.00.

Introduction to Responsible Citizenship. By W. E. Mosher and Associates. New York: Henry Holt & Co., 1941. Pp. 887. $3.25.

Introduction to Social Science: A Survey of Social Problems. By George C. Atteberry and others. New York: Macmillan Co., 1941. Pp. xix, 668. $3.00.

Labor Defends America. By Herman Wolf. Washington, D. C.: American Council on Public Affairs, 1941. Pp. 80. 50 cents.

Management and Morale. By F. J. Roethlisberger. Cambridge: Harvard University Press, 1941. Pp. xxii, 194. $2.00.

Money and Banking. By Frederick A. Bradford. New York: Longmans, Green & Co., 1941. Pp. xv, 845. $3.75.

Municipal Government and Administration in Georgia. By Lloyd B. Raisty. Athens, Georgia: University of Georgia Press, 1941. Pp. xvi, 316.

Office Management and Practices. By John J. W. Neuner and Benjamin R. Haynes. Cincinnati: South-Western Publishing Co., 1941. Pp. xi, 530. $3.75.

Occupational Mobility. By Omar Pancoast, Jr. New York: Columbia University Press, 1941. Pp. viii, 155. $1.75.

Possum Trot: Rural Community, South. By H. C. Nixon. Norman, Oklahoma: University of Oklahoma Press, 1941. Pp. 192. $2.50.

Retailing: Principles and Methods. By Delbert J. Duncan and Charles F. Phillips. Chicago: Richard D. Irwin, 1941. Pp. xv, 1072. $4.00.

Shop Management for the Shop Supervisor. By Ralph Currier Davis. New York: Harper & Bros., 1941. Pp. xii, 333. $2.00.

Statistical Cost Functions of a Hosiery Mill. By Joel Dean. Chicago: University of Chicago Press, 1941. Pp. ix, 116. $1.00.

Swedish Unemployment Policy, 1914–1940. By E. Harrison Clarke. Washington, D. C.: American Council on Public Affairs, 1941. Pp. 179. Cloth $3.25; Paper $2.75.

The College Graduate. By F. Lawrence Babcock. New York: Macmillan Co., 1941. Pp. 112. $1.50.

The Economic Defense of the Western Hemisphere: A Study of Conflicts. By R. F. Behrendt and Others. Washington, D. C.: American Council on Public Affairs, 1941. Pp. 170. Cloth $2.00; Paper $1.50.

The Economics of American Defense. By Seymour E. Harris. New York: W. W. Norton & Co., 1941. Pp. 350.

The Federal Reserve Bank of Richmond. By Charles Guernsey Coit. New York: Columbia University Press, 1941. Pp. xv, 140. $2.00.

The financial Policy of Corporations. By Arthur Stone Dewing. New York: Ronald Press Co., 1941. 2 vols. Pp. xxii, Pp. x, 1550. $10.00.

The Independent Regulatory Commissions. By Robert E. Cushman. New York: Oxford University Press, 1941. Pp. xiv, 780. $5.00.

The Structure of the Nazi Economy. By Maxine Y. Sweezy. Cambridge: Harvard University Press, 1941. Pp. vi, 255. $3.00.

Unused Resources and Economic Waste. By David Rockefeller. Chicago: University of Chicago Press, 1941. Pp. vi, 260. $2.00.